

# Memorial University of Newfoundland

## CALENDAR 2006-2007

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Memorial University of Newfoundland is a place where people and ideas become. For our students, this represents the freedom to explore and experience their creativity and ingenuity.

The silhouettes on the cover of the Calendar symbolize student success. Our students are people with big ideas. Students who flourish here are bright, adventuresome, and intrepid. The University's student experience is about transformation – our most successful students are 21st-century explorers who are full of energy and wonder.

Many of our students seek a path of their own, and are drawn by the idea that this University is on the edge – and not just in our geography, but in new technologies, cultural richness, ingenious discoveries, and compelling ideas.

At Memorial University of Newfoundland, you won't just become something. You'll become.

The 2006-2007 University *Calendar* is on-line at [www.mun.ca/regoff](http://www.mun.ca/regoff).

## IN MEMORIAM

Three hundred and ten former students of the Memorial University College offered themselves for active service in the Second Great War, 1939-1945. The University holds in special honour the past students who have been reported dead or missing and whose names are here given.

DAVID MONROE BAIRD  
LAWRENCE BANIKHIN  
JOHN HAMILTON BARRETT  
WALTER ROBERT BUTT  
HERBERT BOND CLARKE  
ROY CLARKE  
WILLIAM BRADLEY COLLINS  
THOMAS JOSEPH DELANEY  
JOHN KEVIN EVANS  
VICTOR RAYMOND FRENCH  
NEIL WILLOUGHBY HARNETT  
WILLIAM PALMER HOWSE  
DAVID SIMPSON KERR  
BRENDAN DAVID LACEY  
HAROLD LEWIS LEARNING  
LIONEL EDGAR LEGGE  
WALLACE CLIFFORD LUTHER  
EDGAR RAYMOND MARTIN  
DAVID GORDON MORRIS  
CLARENCE WALTER PARSONS  
ALEXANDER DUNCAN SAINT  
ARTHUR JAMES SAMSON  
BERNARD THOMAS SCAMMELL  
FRANCIS SMITH  
ERIC AUGUSTUS SNOW  
CHARLES HENRY STEWART  
JAMES ROBIN STICK  
PHILIP FRANCIS TEMPLEMAN  
HAROLD BAXTER WAREHAM  
JAMES WALCOT WINTER



THIS UNIVERSITY  
WAS RAISED BY  
THE



PEOPLE OF NEWFOUNDLAND  
AS A MEMORIAL TO  
THE FALLEN  
IN THE GREAT WARS

1914 - 1918

1939 - 1945



THAT IN FREEDOM OF LEARNING  
THEIR CAUSE AND SACRIFICE  
MIGHT NOT BE FORGOTTEN



ERECTED BY  
THE NEWFOUNDLAND COMMAND  
OF THE ROYAL CANADIAN REGIMENT

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# GENERAL INFORMATION

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## 1 Note

The contents of this calendar set forth the intentions of the University at the time of publication, with respect to the matters contained therein. THE UNIVERSITY EXPRESSLY RESERVES THE RIGHT TO DEVIATE FROM WHAT APPEARS IN THE CALENDAR, including both the content and scheduling therein, in whole or in part, and including, without limiting the generality of the foregoing, the right to revise the content of, and to cancel, defer, reschedule or suspend, in whole or in part, the scheduling of particular periods of instruction, courses, or programs, and the academic program of the University, and to alter, accelerate or defer fees and charges, and to do any or all of the above either in order to serve what the University considers to be the best interests of the academic or student community or of the University itself, or because of any circumstance or occurrence, whether occurring by or through the wilful act or negligence of the University, its agents, servants and employees, or otherwise and whether or not beyond the reasonable or other control of the University, and without limiting the generality of the foregoing, as a result of circumstances or occurrences including financial resources, natural catastrophe or disaster, the health, safety and well-being of the employees or students of the University, labour disagreements or disputes, slow-downs, work-stoppages, and strikes. THE UNIVERSITY DOES NOT ACCEPT, AND HEREBY EXPRESSLY DISCLAIMS, ANY OR ALL RESPONSIBILITY OR LIABILITY to any person, persons or group, for any loss, injury, damages or adverse effect, either direct or indirect, consequential or otherwise, arising out of any one or more of such deviations. The University hereby disclaims liability to any person who may suffer loss as a result of reliance upon any information contained in this calendar.

Each and every of the subsequent provisions contained in this Calendar, and the relationship, both legal and otherwise, between the University, and its students, is expressly subject to and governed by the above provisions.

The Office of the Registrar will assist students with any questions or problems which might arise concerning the interpretation of academic regulations. It is, however, the responsibility of students to see that their academic programs meet the University's regulations in all respects.

## 2 Glossary of Terms Used in This Calendar

In this calendar "Grenfell College" refers to Sir Wilfred Grenfell College and "Marine Institute" refers to the Fisheries and Marine Institute of Memorial University of Newfoundland. "University", when capitalized, refers to Memorial University of Newfoundland.

**Academic standing:**

is an enrolment status normally determined each semester by a regular evaluation procedure used to assess whether or not students are meeting the standards prescribed for continuing in the University and/or their programs.

**Academic unit:**

refers to a centre, department, division, faculty, program or school, other than an administrative unit, as the context requires.

**Academic year:**

runs from September 1 to August 31.

**Accelerated course:**

is a course that is offered in a shorter time frame than a semester or session.

**Administrative unit:**

refers to an office, division or centre, other than an academic unit, as listed in the **Administrative Offices of the University** section of the Calendar.

**Appeal:**

is the challenge of, or the request for review of, a judgment regarding the application of regulations.

**Assignment:**

is an evaluative exercise including but not limited to assigned work, term papers and projects.

**Certificate:**

is an academic designation awarded for the completion of a specified program of study which is of shorter duration than a degree or diploma.

**Challenge for credit:**

is the request for consideration of academic credit resulting from experience or knowledge gained elsewhere for which transfer credit cannot be awarded.

**Co-requisite course:**

is a course which may be taken concurrently with or successfully completed prior to the course for which it is required.

**Course:**

is a unit of work in a particular subject normally extending through one semester or session, the completion of which normally carries credit toward the fulfilment of the requirements of certain degrees, diplomas or certificates.

**Course number:**

courses are designated by four characters. The first character signifies the level of the course. Where all four characters are numeric, the last three are used by academic units to indicate various information such as course sequence and area of study. Where the last character is alphabetic, the letter:

**A** or **B** identifies a linked course. No credits or points are given until the "B" part is completed.

**C** identifies an English course that does not carry credit towards a degree, diploma or certificate.

**F** identifies a foundation course that is intended to remedy a specific academic weakness and does not carry credit towards a degree, diploma or certificate.

**W** identifies a course in either a work term in a co-operative program or a special project in certain of the professional schools and faculties and may or may not be assigned credit hours.

**X** identifies a course which represents an entire semester's work and carries 15 credit hours.

**Courses offered outside of the normal time frame:**

are those with different start and/or end dates than those of the semester or session.

**Credit hour:**

is the measure used to reflect the relative weight of a given course toward the fulfilment of appropriate degree, diploma, certificate, major, minor, or other program requirements. A weight of 1 credit hour normally means that the course meets for lectures one hour per week for the duration of a semester or two hours per week for the duration of a session. Unless otherwise indicated, a course normally has a credit value of 3 credit hours.

**Credit-restricted courses:**

are courses which are closely related but not equivalent. Credit is limited to one of the credit-restricted courses. Normally, credit-restricted courses cannot be substituted, one for the other, to satisfy program requirements.

**Cross-listed courses:**

are courses which are listed under two or more academic units and which can be taken for credit from one unit only. Cross-listed courses can be substituted, one for the other, to satisfy program requirements.

**Degree:**

is an academic designation awarded for the completion of a specified program of study which is of longer duration than a diploma or certificate.

**Diploma:**

is an academic designation awarded for the completion of a specified program of study which is of shorter duration than a degree and longer duration than a certificate.

**Distance education course:**

is a university course designed for people who wish to study outside a traditional university setting. Instructors and students are separated by time and/or space. Distance education courses include correspondence, teleconference and world wide web courses.

**Equivalent courses:**

are those which are determined to be equal for credit determination, although the subject area or course number will differ. These are normally identified with the phrase "Same as".

**Examination:**

is an evaluative exercise including but not limited to tests, quizzes or mid-term, final or supplementary examinations.

**Foundation course:**

is a course intended to remedy a specific academic weakness and is identified by the letter "F" as the last character of the course number. A foundation course does not carry credit towards a degree, diploma or certificate.

**GPA:**

is the abbreviation for grade point average.

**Head of academic unit:**

includes but is not limited to co-ordinator, dean, department head, director, principal, or equivalent.

**Inactive courses:**

are courses which have not been offered in the previous three academic years and which are not scheduled to be offered in the current academic year.

**Lecturing period:**

is a designated period of lectures within a semester or session as defined by the University Diary.

**Linked course:**

is a course comprising two components and is normally identified by the letter "A" or "B" as the last character of the course number. No credits or points are given until the "B" part is completed.

**Major:**

is a subject or field of study which a student normally specializes in during the course of degree studies.

**Minor:**

is a subject or field of study which a student normally pursues secondary to a major during the course of degree studies.

**Prerequisite course:**

is a course which must be successfully completed prior to commencing the course for which it is required.

**Program:**

is a series of courses, the successful completion of which, if all requirements are met, qualifies the candidate for a degree, diploma or certificate.

**Registration:**

is the process of selecting, enrolling in, and being assessed fees for courses.

**Registration period:**

is, in any semester, the period extending from the first day of registration to two weeks following the first day of lectures, as stated in the University Diary. In any session, it is the period extending from the first day of registration to one week following the first day of lectures, as stated in the University Diary.

**Repeatable course:**

is a course that may be taken for credit in several semesters to a maximum number of credit hours. All such courses shall have specified both the number of credit hours assigned per semester and the maximum number of credit hours to be awarded.

**Semester:**

is a period of approximately fourteen consecutive weeks during which there are at least twelve weeks of lecture. Normally the Fall Semester commences in early September, the Winter Semester in early January, and the Spring Semester in early May.

**Session:**

is a period of approximately seven consecutive weeks in the Spring Semester during which there are at least six weeks of lecture. The first half of Spring Semester is designated as Intersession; the second half of Spring Semester is designated as Summer Session.

**Student-Web/Student Self-Service:**

is a suite of e-business student services including registration and the provision of personalized student information.

**Transcript:**

is the complete and unabridged report of a student's academic record.

**Transfer credit:**

is academic credit granted for work completed at an institution other than Memorial University of Newfoundland.

**TRS:**

is the abbreviation for the Telephone Registration System.

**Waiver:**

is the permission granted by the appropriate authority for exemption from a particular program requirement and/or a particular university regulation.

### 3 University Diary for the Academic Year 2006-2007

June 1, 2006, Thursday	Registration begins for Interns/Residents and for Undergraduate Medical Students
July 1, 2006, Saturday	Academic year begins for Interns/Residents
July 17, 2006, Monday	Registration begins for eligible students registering in Undergraduate courses, Fall Semester 2006
August 1, 2006, Tuesday	Deadline for registration and fees payment for Interns/Residents
August 7, 2006, Monday	Registration begins for Graduate Students, Fall Semester, 2006
August 21, 2006, Monday	Fall Work Term begins for Co-operative Education Students
August 28, 2006, Monday	Sessions begin for Pre-clerkship and Third-year Clerkship Medical Students (Class of 2008)
September 1, 2006, Friday	Final date for filing applications for admission to graduate programs commencing in Winter Semester 2007. Applications received after this date will be processed as time and resources permit. Applicants should note that most graduate academic units have earlier deadlines and should be contacted directly for further information Deadline for registration for Undergraduate Medical Students
September 4, 2006, Monday	Labour Day. No lectures
September 4 & 5, 2006, Monday & Tuesday	Orientation for all new first semester students
September 6, 2006, Wednesday	Lectures begin, Fall Semester Fall Internship begins for Education Students Deadline for fees payment, Fall Semester Deadline for fees payment, Undergraduate Medical Students, Fall Semester
September 8, 2006, Friday	Lectures will follow the Monday schedule on this day only
September 12, 2006, Tuesday	Regular Meeting of the Senate
September 13, 2006, Wednesday	Final date for receipt, by the Registrar, of replacement grades for "INCOMPLETE" grades in Undergraduate and Graduate courses, Spring Semester (Intersession, Summer Session and 14-week) 2006
September 20, 2006, Wednesday	End of Regular Registration Period and last day for Undergraduate and Graduate Students to add courses, Fall Semester Last day for Undergraduate Students to drop courses and receive a 100% refund of tuition fees, Fall Semester
September 27, 2006, Wednesday	Last day for Undergraduate students to drop courses and receive a 50% refund of tuition fees, Fall Semester Final date for Graduate Students to withdraw from programs without incurring liability for tuition fees, Fall Semester Final date for Departments to submit Recommendation for Award of Degree in order for graduate students to be deregistered from Graduate Registration 9000/Medicine 9900 without incurring any liability for continuance fees, Fall Semester
October 1, 2006, Sunday	Final date for filing applications for undergraduate admission/re-admission to Winter Semester 2007. Applications received after this date will be processed as time and resources permit
October 4, 2006, Wednesday	Last day for Undergraduate students to drop courses and receive a 25% refund of tuition fees, Fall Semester. No tuition fees are refunded for courses dropped after this date
October 9, 2006, Monday	Thanksgiving Day. No lectures. Fall Semester Break begins at St. John's Campus and Sir Wilfred Grenfell College
October 10, 2006, Tuesday	Regular Meeting of the Senate
October 11, 2006, Wednesday	Lectures resume at St. John's Campus and Sir Wilfred Grenfell College; lectures will follow the Monday schedule on this day only
October 12, 2006, Thursday	Lectures will follow the Tuesday schedule on this day only
October 20, 2006, Friday	Annual Fall Convocation, St. John's
October 25, 2006, Wednesday	Last day for Undergraduate Students and Graduate Students to drop courses without academic prejudice, Fall Semester Final date for Departments to submit Recommendation for Award of Degree in order for graduate students to receive a 50% refund of continuance fees, Fall Semester
October 25, 2006, Wednesday to October 29, 2006, Sunday	I love MUNdays: Join in this annual festival of events at both Corner Brook and St. John's campuses-embracing creativity, diversity, service and leadership at Memorial University
November 8, 2006, Wednesday	Registration begins for eligible students registering in Undergraduate courses, Winter Semester 2007
November 10, 2006, Friday	Mid-term break for Pre-clerkship Medical Students

November 13, 2006, Monday	Remembrance Day holiday. No lectures No lectures for Pre-clerkship Medical Students
November 14, 2006, Tuesday	Regular meeting of the Senate
November 22, 2006, Wednesday	Final date for Departments to submit Recommendation for Award of Degree in order for graduate students to receive a 25% refund of continuance fees, Fall Semester
December 1, 2006, Friday	Lectures end, Fall Semester Registration begins for Graduate Students, Winter Semester 2007
December 6, 2006, Wednesday	Examinations begin, Fall Semester Final date for submission of Work Reports by Co-operative Education Students
December 8, 2006, Friday	Fall Internship ends for Education Students
December 12, 2006, Tuesday	Regular meeting of the Senate
December 15, 2006, Friday	Examinations end, Fall Semester Fall Work Term ends for Co-operative Education Students Sessions end for Pre-clerkship Medical Students
December 17, 2006, Sunday	Sessions end for Third-year Clerkship Medical Students (Class of 2008)
December 22, 2006, Friday	Sessions end for Fourth-year Clerkship Medical Students (Class of 2007)
January 1, 2007, Monday	Final date for filing applications for admission to graduate programs commencing in Spring Semester 2007. Applications received after this date will be processed as time and resources permit. Applicants should note that most graduate academic units have earlier deadlines and should be contacted directly for further information
January 2, 2007, Tuesday	Winter Work Term begins for Co-operative Education Students Sessions begin for Third and Fourth-year Clerkship Medical Students (Classes of 2007 and 2008)
January 3, 2007, Wednesday	Sessions begin for Pre-clerkship Medical Students Winter Internship begins for Education Students
January 7, 2007, Sunday	Orientation for new first semester students
January 8, 2007, Monday	Lectures begin, Winter Semester Deadline for fees payment, Winter Semester Deadline for fees payment, Undergraduate Medical Students, Winter Semester
January 9, 2007, Tuesday	Regular Meeting of the Senate
January 15, 2007, Monday	Final date for filing, with the Registrar, applications for Degrees and Diplomas for the Spring Convocation 2007. Applications received after this date will be processed as time and resources permit Final date for receipt, by the Registrar, of replacement grades for "INCOMPLETE" grades in Undergraduate and Graduate courses, Fall Semester 2006 Final date for submission of Master's and Doctoral Theses and Reports for examination, by candidates who expect to receive their degree at the Spring Convocation 2007. Theses and Reports received after this date will be processed as time and resources permit
January 22, 2007, Monday	End of Regular Registration Period and last day for Undergraduate and Graduate Students to add courses, Winter Semester Last day for Undergraduate Students to drop courses and receive a 100% refund of tuition fees, Winter Semester
January 29, 2007, Monday	Last day for Undergraduate students to drop courses and receive a 50% refund of tuition fees, Winter Semester Final date for Graduate Students to withdraw from programs without incurring liability for tuition fees, Winter Semester Final date for Departments to submit Recommendation for Award of Degree in order for graduate students to be deregistered from Graduate Registration 9000/Medicine 9900 without incurring any liability for continuance fees, Winter Semester
February 1, 2007, Thursday	Final date for filing undergraduate applications for admission/re-admission to Spring Semester (14-week, Intersession and Summer Session) 2007. Applications received after this date will be processed as time and resources permit
February 5, 2007, Monday	Last day for Undergraduate students to drop courses and receive a 25% refund of tuition fees, Winter Semester. No tuition fees are refunded for courses dropped after this date
February 13, 2007, Tuesday	Regular Meeting of the Senate
February 19, 2007, Monday	Winter Semester Break begins at St. John's Campus and Sir Wilfred Grenfell College
February 22, 2007, Thursday	Lectures resume at St. John's Campus and Sir Wilfred Grenfell College

## 8 General Information 2006-2007

February 26, 2007, Monday	Final date for Undergraduate and Graduate Students to drop courses without academic prejudice, Winter Semester Final date for Departments to submit Recommendation for Award of Degree in order for graduate students to receive a 50% refund of continuance fees, Winter Semester
March 1, 2007, Thursday	Final date for filing undergraduate applications for admission/re-admission to Fall Semester 2007. Applications received after this date will be processed as time and resources permit
March 13, 2007, Tuesday	Regular Meeting of the Senate
March 23, 2007, Friday	Sessions end for Spring break for Pre-clerkship Medical Students
March 26, 2007, Monday	Final date for Departments to submit Recommendation for Award of Degree in order for graduate students to receive a 25% refund of continuance fees, Winter Semester
April 2, 2007, Monday	Registration begins for eligible students registering in Undergraduate courses, Spring Semester (14-week courses, Intersession and Summer Session) 2007 Sessions begin for Pre-clerkship Medical Students
April 4, 2007, Wednesday	Lectures end, Winter Semester
April 5, 2007, Thursday	Winter Internship ends for Education Students
April 6, 2007, Friday	Good Friday. No classes or examinations
April 9, 2007, Monday	Examinations begin, Winter Semester Final date for submission of Work Reports by Co-operative Education Students
April 10, 2007, Tuesday	Regular Meeting of the Senate
April 18, 2007, Wednesday	Examinations end, Winter Semester Registration begins for Graduate Students, Spring Semester (14-week courses, Intersession and Summer Session) 2007
April 20, 2007, Friday	Winter Work Term ends for Co-operative Education Students Sessions end for Fourth-year Clerkship Medical Students (Class of 2007)
April 23, 2007, Monday	Spring Work Term begins for Co-operative Education Students
April 30, 2007, Monday	Lectures begin for Engineering students in Academic Terms 4 and 7
May 1, 2007, Tuesday	Final date for filing applications for admission to graduate programs commencing in Fall Semester 2007. Applications received after this date will be processed as time and resources permit. Applicants should note that most graduate academic units have earlier deadlines and should be contacted directly for further information
May 7, 2007, Monday	Lectures begin, Intersession and 14-week Spring Semester Deadline for fees payment, Spring Semester (14-week courses, Intersession and Summer Session)
May 8, 2007, Tuesday	Regular Meeting of the Senate
May 11, 2007, Friday	Annual Spring Convocation, Sir Wilfred Grenfell College session, Corner Brook
May 14, 2007, Monday	Final date for receipt, by the Registrar, of replacement grades for "INCOMPLETE" grades in Undergraduate and Graduate Courses, Winter Semester 2007 End of Regular Registration Period and last day for Undergraduate and Graduate Students to add courses, Intersession Last day for Undergraduate Students to drop courses and receive a 100% refund of tuition fees, Intersession
May 17, 2007, Thursday	Last day for Undergraduate students to drop courses and receive a 50% refund of tuition fees, Intersession
May 21, 2007, Monday	End of Regular Registration Period and last day for Undergraduate and Graduate Students to add courses, 14-week Spring Semester Last day for Undergraduate Students to drop courses and receive a 100% refund of tuition fees, 14-week Spring Semester Last day for Undergraduate students to drop courses and receive a 25% refund of tuition fees, Intersession. No tuition fees will be refunded for Intersession courses dropped after this date No lectures for Pre-clerkship Medical Students
May 23, 24, & 25, 2007, Wednesday, Thursday, & Friday	Annual Spring Convocation, St. John's
May 28, 2007, Monday	Last day for Undergraduate students to drop courses and receive a 50% refund of tuition fees, 14-week Spring Semester Final date for Graduate Students to withdraw from programs without incurring any liability for tuition fees, 14-week Spring Semester Final date for Departments to submit Recommendation for Award of Degree in order for graduate students to be deregistered from Graduate Registration 9000/Medicine 9900 without incurring any liability for continuance fees, Spring Semester

May 31, 2007, Thursday	Final date for Undergraduate and Graduate Students to drop courses without academic prejudice, Intersession
June 4, 2007, Monday	Last day for Undergraduate students to drop courses and receive a 25% refund of tuition fees, 14-week Spring Semester. No tuition fees will be refunded for 14-week Spring Semester courses dropped after this date
June 15, 2007, Friday	Lectures end, Intersession
June 18, 2007, Monday	Examinations begin, Intersession Semester Break begins, 14-week Spring Semester
June 20, 2007, Wednesday	Examinations end, Intersession
June 21, 2007, Thursday	Lectures resume, 14-week Spring Semester
June 22, 2007, Friday	Lectures will follow the Monday schedule on this day only Sessions end for Pre-clerkship Medical Students Final date for submission of Master's and Doctoral Theses and Reports for examination, by candidates who expect to receive their degree at the Fall Convocation 2007. Theses and Reports received after this date will be processed as time and resources permit
June 25, 2007, Monday	Lectures begin for Undergraduate Students and for Graduate courses in Education, Summer Session Final date for Undergraduate and Graduate Students to drop courses without academic prejudice, 14-week Spring Semester Final date for Departments to submit Recommendation for Award of Degree in order for graduate students to receive a 50% refund of continuance fees, Spring Semester
June 29, 2007, Friday	Academic Year ends for Interns/Residents
July 2, 2007, Monday	Memorial Day holiday. No lectures End of Regular Registration Period and last day for Undergraduate and Graduate Students to add courses, Summer Session Last day for Undergraduate Students to drop courses and receive a 100% refund of tuition fees, Summer Session
July 5, 2007, Thursday	Last day for Undergraduate students to drop courses and receive a 50% refund of tuition fees, Summer Session
July 9, 2007, Monday	Last day for Undergraduate students to drop courses and receive a 25% refund of tuition fees, Summer Session. No tuition fees will be refunded for Summer Session courses dropped after this date
July 15, 2007, Sunday	Final date for filing, with the Registrar, applications for Degrees and Diplomas for the Fall Convocation 2007. Applications received after this date will be processed as time and resources permit
July 19, 2007, Thursday	Final date for Undergraduate and Graduate Students to drop courses without academic prejudice, Summer Session
July 23, 2007, Monday	Final date for Departments to submit Recommendation for Award of Degree in order for graduate students to receive a 25% refund of continuance fees, Spring Semester
July 27, 2006, Friday	Lectures end for Engineering students in Academic Terms 4 and 7
August 3, 2007, Friday	Lectures end, 14-week Spring Semester
August 4, 2007, Saturday	Lectures end, Summer Session Lectures will follow the Monday schedule for Summer Session courses
August 6, 2007, Monday	Examinations begin, 14-week Spring Semester and Summer Session Final date for submission of Work Reports by Co-operative Education Students
August 8, 2007, Wednesday	Examinations end, Summer Session
August 11, 2007, Saturday	Examinations end, 14-week Spring Semester
August 17, 2007, Friday	Spring Work Term ends for Co-operative Education Students
August 24, 2007, Friday	Sessions end for Third-year Clerkship Medical Students (Class of 2008)

## 4 Governing Bodies and Staff

### 4.1 The Board of Regents 2005-2006

#### Officers of the Board

Vacant, Chair of the Board  
Dr. Georgina Hedges, Eastport, Vice-Chair of the Board  
Eleanor Bennett, St. John's, Secretary to the Board

#### Ex-Officio Members

The Chancellor  
The President

The Vice-President (Academic)

#### Members Appointed by the Lieutenant-Governor in Council

Gail Aylward, St. John's  
Mary Broderick, Baie Verte  
Pat Coish Snow, Clarendville  
Sharon Duggan, Mt. Pearl  
Dr. Wynanne Downer, Corner Brook  
Dorothy George, Halfway Point  
Dr. Georgina Hedges, Eastport  
Dr. Brendan Lewis, Corner Brook  
Joan Pinsent, Stephenville

David Porter, Montreal, Quebec  
 Darlene Russell, St. John's  
 Harvey Short, Paradise  
 Vacant  
 Vacant  
 Vacant  
 Vacant

#### Members Elected by the Memorial University of Newfoundland Alumni Association

Ruth Canning, St. John's  
 Deanne Fleet, St. John's  
 Ann Marie Hann, Calgary  
 Earl Ludlow, Paradise  
 Douglas Moores, Q.C., Bay Roberts  
 Eleanor Swanson, St. John's

#### Student Members Appointed by the Lieutenant-Governor in Council

Stephen Cranford (GCSU)  
 Anas El-Aneed (GSU)  
 Meghan Mitchell (MUNSU)  
 Stephen Winsor (MISU)

## 4.2 The Senate 2005-2006

#### Ex-officio Members

Dr. Axel Meisen: President and Chairman  
 The Hon. Dr. John C. Crosbie: Chancellor  
 Dr. Eddy Campbell: Vice-President (Academic)  
 Dr. Christopher Loomis: Vice-President (Research)  
 Dr. John Ashton: Principal, Sir Wilfred Grenfell College  
 Dr. Shelly Birnie-Lefcovitch: Director, School of Social Work  
 Mr. Glenn Blackwood: Director, Fisheries and Marine Institute  
 Dr. Alice Collins: Dean, Faculty of Education  
 Mr. Glenn Collins: University Registrar and Secretary of the Senate  
 Dr. Mary Bluechardt: Director, School of Human Kinetics and Recreation  
 Dr. Tom Gordon: Director, School of Music  
 Mr. Richard Ellis: University Librarian  
 Dr. Gary Gorman: Dean, Faculty of Business Administration  
 Dr. Ray Gosine: Dean, Faculty of Engineering and Applied Science  
 Dr. Linda Hensman: Director, School of Pharmacy  
 Mr. Bruce Hollett: Deputy Minister of Education  
 Dr. Chet Jablonski: Dean, School of Graduate Studies  
 Dr. Sandra LeFort: Director, School of Nursing  
 Dr. Robert Lucas: Dean, Faculty of Science  
 Dr. James Rourke: Dean, Faculty of Medicine  
 Dr. Lilly Walker: Dean, Student Affairs and Services  
 Ms. Doreen Whalen: Director, Division of Lifelong Learning  
 Dr. Steven Wolinetz: Interim Dean, Faculty of Arts

#### Elected Members

Dr. William Schipper: Faculty of Arts, Humanities  
 Dr. Peter Trnka: Faculty of Arts, Humanities  
 Professor Donna Walsh: Faculty of Arts, Humanities  
 Dr. Vit Bubenik: Faculty of Arts, Social Sciences  
 Dr. Mark Tate: Faculty of Arts, Social Sciences  
 Dr. David Tulett: Faculty of Business Administration  
 Dr. James Wyse: Faculty of Business Administration  
 Dr. Glenn Clark: Faculty of Education  
 Dr. Walter Okshesky: Faculty of Education  
 Dr. Dennis Peters: Faculty of Engineering and Applied Science  
 Dr. John Quaicoe: Faculty of Engineering and Applied Science  
 Dr. Khalid Aziz: Faculty of Medicine  
 Dr. Atamjit Gill: Faculty of Medicine  
 Dr. June Harris: Faculty of Medicine  
 Dr. Donald McKay: Faculty of Medicine  
 Dr. Catherine Popadiuk: Faculty of Medicine  
 Dr. Vernon Richardson: Faculty of Medicine  
 Dr. Robert Adamec: Faculty of Science  
 Dr. Edward Brown: Faculty of Science  
 Dr. Robert Helleur: Faculty of Science  
 Dr. Luise Hermanutz: Faculty of Science  
 Dr. Serpil Kocabiyik: Faculty of Science  
 Dr. Michael Morrow: Faculty of Science  
 Dr. David Pike: Faculty of Science  
 Dr. John Whitehead: Faculty of Science  
 Dr. James Wright: Faculty of Science

Mr. Kenneth Baker: Fisheries and Marine Institute  
 Mr. Cyr Couturier: Fisheries and Marine Institute  
 Mr. Edward Durnford: Fisheries and Marine Institute  
 Captain John Ennis: Fisheries and Marine Institute  
 Professor Vivienne Kuester: School of Human Kinetics and Recreation  
 Dr. Kati Szego: School of Music  
 Dr. Donna Moralejo: School of Nursing  
 Dr. Mohsen Daneshtalab: School of Pharmacy  
 Dr. Dennis Kimberley: School of Social Work  
 Mr. Edward Andrews: Sir Wilfred Grenfell College  
 Dr. Olaf Janzen: Sir Wilfred Grenfell College  
 Dr. Paul Wilson: Sir Wilfred Grenfell College  
 Mr. Christopher Dennis: University Library  
 Ms. Laura Scott: University Library

#### Graduate Students

Mr. Stefan Jensen  
 Ms. Sherrie MacCarthy  
 Mr. Shannon Sullivan

#### Undergraduate Students

Ms. Zoiey Cobb  
 Mr. Roger Drinkall  
 Mr. James Farrell  
 Mr. Cletus Flaherty  
 Ms. Katherine Giroux-Bougard  
 Mr. Mike Lovell  
 Ms. Emilie Martin  
 Mr. Imoh Igbo-Osagie  
 Mr. James Shaw

## 4.3 University Officers and Staff 2005-2006

#### Visitor

Hon. E.M. Roberts, O.N.L., Q.C., B.A., LL.B. *Toronto*, LL.D.  
*Memorial*, Lieutenant-Governor of Newfoundland and Labrador

#### Chancellor

Hon. J.C. Crosbie, O.C., P.C., Q.C., B.A.(Hons.) *Queen's*, LL.B.  
*Dalhousie*, LL.D. *Dalhousie*, LL.D. *Memorial*

#### Chairman of the Board of Regents

L. Wheeler. B.A.(Ed.), B.A. *Memorial*

#### President and Vice-Chancellor

A. Meisen, B.Sc. *Imperial College of Science and Technology*,  
 M.Sc. *California Institute of Technology*, Ph.D. *McGill*, P.Eng.,  
 Eurling

#### Vice-President (Academic) and Pro Vice-Chancellor

H.E.A. Campbell, B.Sc., M.Sc. *Memorial*, Ph.D. *Toronto*

#### Vice-President (Administration and Finance)

K. Decker, B.Comm.(Hons.) *Memorial*, C.A. (Newfoundland)

#### Vice-President (Research)

C. Loomis, B.Sc.(Hons.), M.Sc., Ph.D. *Queen's*

#### Associate Vice-President (Academic)

M. Collins, B.Sc., Cert.Ed., M.Sc. *Southampton*, B.Ed., M.Ed.  
*Memorial*, Ph.D. *Keele*, C.Biol.

#### Principal, Sir Wilfred Grenfell College at Corner Brook

J. Ashton, B.A.(Hons.) *London School of Economics*, M.A.  
*University of Leeds*, Ph.D. *Memorial*

#### Vice-Principal, Sir Wilfred Grenfell College at Corner Brook

H. Pike, B.A. *Memorial*, M.A. *Dalhousie*, Ph.D. *N.Y.*

#### Executive Director, Fisheries and Marine Institute

G. Blackwood, B.Sc.(Hons.), M.A. *Memorial*

#### Dean, Student Affairs and Services

L.J. Walker, B.A. *Jamestown College*, M.A., Ph.D. *University of North Dakota*

#### Presidents Emeriti

L. Harris, D.C., B.A.(Ed.), M.A. *Memorial*, Ph.D. *U. of London*,  
 LL.D. *Memorial*  
 A.W. May, O.C., B.Sc.(Hons.), M.Sc. *Memorial*, Ph.D. *McGill*, DU  
*Ottawa*, D.Sc. *Memorial*, LL.D. *Brock*



**Dean Emeritus**

I.E. Rusted, O.C., B.A. *Toronto*, M.Sc. *McGill*, M.D. *Dalhousie*,  
LL.D. *Mount Allison*, LL.D. *Dalhousie*, D.S.Litt. *Trinity College*,  
LL.D., *Memorial*, FRCPC, FACP

**DEANS****Faculty of Arts**

Dr. S. Wolinetz, Interim Dean

**Faculty of Arts**

Professor P. Ayers, Associate Dean (Undergraduate)

**Faculty of Arts**

Dr. É. Simms, Associate Dean (Research and Graduate)

**Faculty of Business Administration**

Dr. G. Gorman, Dean

**Faculty of Business Administration**

T. Clift, Associate Dean (Academic Programs)

**Faculty of Business Administration**

Dr. J. Parsons, Associate Dean (Research)

**Faculty of Education**

Dr. A. Collins, Dean

**Faculty of Education**

Dr. D. Dibbon, Associate Dean (Undergraduate Programs)

**Faculty of Education**

Dr. R. Hammett, Associate Dean (Graduate Programs)

**Faculty of Engineering and Applied Science**

Dr. R. Gosine, Dean

**Faculty of Engineering and Applied Science**

Dr. R. Venkatesan, Associate Dean (Graduate Studies and  
Research)

**Faculty of Engineering and Applied Science**

Dr. J. Quaicoe, Associate Dean (Undergraduate)

**Faculty of Medicine**

Dr. J. Rourke, Dean

**Faculty of Medicine**

Dr. S. Peters, Vice Dean, Professional Development (Medicine)

**Faculty of Medicine**

Dr. K. Mearow, Associate Dean of Basic Medical Sciences

**Faculty of Medicine**

Dr. M. Murray, Associate Dean of Community Medicine

**Faculty of Science**

Dr. R. Lucas, Dean

**Faculty of Science**

Dr. G. Gardner, Associate Dean (Undergraduate and  
Administration)

**Faculty of Science**

Dr. D. Schneider, Associate Dean (Research)

**Graduate Studies**

Dr. C. Jablonski, Dean

**Graduate Studies**

Dr. N. Golfman, Associate Dean

**DIRECTORS****Alumni Affairs and Development**

Dr. P. Blackwood, Director

**Animal Care Services**

Dr. L. Husa, Director

**Centre for Institutional Analysis and Planning**

P. Chancey, Director

**Computing and Communications**

Vacant

**Distance Education and Learning Technologies**

A.M. Vaughan, Director

**Distance Education and Learning Technologies**

R. Hyde, Associate Director, Design, Development and Production

**Division of Lifelong Learning**

D. Whalen, Director

**Division of Marketing and Communications**

V. Collins, Director

**Division of Marketing and Communications**

P. Morris, Associate Director, Communications

**Division of Marketing and Communications**

M. Pickard, Associate Director, Marketing

**Enterprise Risk Management**

D. Head, Director

**Facilities Management**

D. Miles, Director

**Faculty Relations**

Dr. J. Strawbridge, Director

**Financial and Administrative Services**

B. Colbourne, Director

**Administration and Finance**

D. Waterman, Director, Sir Wilfred Grenfell College

**Human Resources**

L. Hollett, Director

**Human Resources**

R. Nichols, Associate Director

**Human Resources**

C. Horlick, Associate Director and Alternative Dispute Resolution  
Coordinator

**Labrador Institute**

Vacant

**Office of the Registrar**

G.W. Collins, University Registrar

**Office of the Registrar**

S.M. Singleton, Deputy Registrar

**Office of Research**

B. Cox, Director

**School of Human Kinetics and Recreation**

Dr. M. Bluehardt

**School of Music**

Dr. T. Gordon, Director

**School of Nursing**

Dr. S. LeFort, Director

**School of Nursing**

M. Hackett, Associate Director (Undergraduate Programs)

**School of Nursing**

Dr. A. Gaudine, Associate Director (Graduate Programs and  
Research)

**School of Pharmacy**

Dr. L. Hensman, Director

**School of Social Work**

Dr. S. Birnie-Lefcovitch, Director

**Student Recruitment and Promotion**

S. Devine, Director

**Technical Services**

R. Sheppard, Director

**University Library**

R.H. Ellis, University Librarian

**University Library**

S. Cleyle, Associate University Librarian

**University Library**

G. Beckett, Associate University Librarian (Health Sciences Library)

**University Library**

E. Behrens, Associate University Librarian (Sir Wilfrid Grenfell College)

## 5 Administrative Offices of the University

Fisheries and Marine Institute, Sir Wilfred Grenfell College, Special Divisions and members of Faculties and Schools are listed in the appropriate sections of the University Calendar.

### ALUMNI AFFAIRS AND DEVELOPMENT

**Director**

Blackwood, P., B.Sc. *Memorial*, M.Sc., Ph.D. *Western Ontario*

**Assistant Director**

Parsons, L.K., B.Comm. *Memorial*

### CENTRE FOR INSTITUTIONAL ANALYSIS AND PLANNING

**Director**

Chancey, P.F., B.Sc., B.Comm., M.Ed. *Memorial*

**Senior Institutional Analysts**

Matthews, K.R., B.A.(Hons.), M.B.A. *Memorial*  
Pippy, S.E., B.Sc.(Hons.), M.Sc. *Memorial*

**Academic Program Review Coordinator**

Bessey, J.M., B.Voc.Ed. *Memorial*

**Institutional Analyst**

Thorne, T.L., B.A., B.Comm. *Memorial*

### COMPUTING AND COMMUNICATIONS

**Director**

Vacant

**Associate Director, Applications and Client Services**

Kirby, P.

**Associate Director, Technology**

Power, B.

**Manager, Finance and Administration**

Bennett, C.

**Manager, Communications**

Campbell, R.

**Manager, Client Support Services**

Dawson, B.

**Manager, Technical Support (Operations)**

Dodge, R.

**Manager, IT Security**

Forward, K.

**Manager, Technical Support (Development)**

Harlick, L.

**Manager, Personal Computing**

Husa, J.

**HSC Mail Room/Print Shop Supervisor**

Chafe, G.

**Central Mail Room Supervisor**

Predham, R.

### ENTERPRISE RISK MANAGEMENT

**Director**

Head, D., B. Comm. (Co-op), M.B.A. *Memorial*

**Risk Analyst**

Parrot, L., B.Comm. (Hons.) *Memorial*

### FACILITIES MANAGEMENT

**Director**

Miles, D., P.Eng.

**Assistant Director (Development and Renewal)**

Hiscock, K., P.Eng.

**Assistant Director (Operations and Maintenance)**

Marsh, W.

**Manager of Administrative Services**

Whelan, C.

**Manager of Campus Enforcement and Patrol**

Browne, J.

**Manager of Custodial Services**

Dillon, R.

**Manager of Safety and Environmental Services**

Boyd, C.

### FINANCIAL AND ADMINISTRATIVE SERVICES

**Director**

Colbourne, B., B. Comm. *Memorial*, C.A.

**Associate Director**

Collis, D., B.Comm. *Memorial*, CA.

**Manager, Financial Reporting & Analysis**

Vacant

**Senior Financial Analyst**

Vacant

**Manager, Budgets**

Pike, L., B.Comm., M.B.A. *Memorial*

**Senior Budget Analyst**

Walsh, D.

**Manager, Printing Services**

Cranford, B.

**Production Manager, Printing Services**

Hawkins, P.

**Grants Officer**

Woolgar, W.

**Staff Accountant - Travel and Disbursements**

Clancey, P.

**Accounting Systems Specialist**

Harding, M.

**Senior Staff Accountant - Cashier's Office**

Hanson, G.

**Staff Accountant - Accounts Payable**

Noseworthy, L.

**General Office Supervisor, Science Building**

Hicks, M.

**General Office Supervisor, G.A. Hickman Building**

Bourne, C.

**Staff Accountant - Grant's Office**

Rose, S.

### HUMAN RESOURCES

**Director**

Hollett, L., B.A. *McMaster*, M.I.R. *Toronto*, CHRP

**Associate Director**

Nichols, R.

**Associate Director and Alternative Dispute Resolution Coordinator**

Horlick, C., B.Comm. *Memorial*

**Manager - Recruitment, Job Evaluation and Salary Administration**Clarke, M., B.Comm. *Memorial***Manager - Finance and Payroll**Pike, G., B.Comm. *Memorial*, C.M.A.**Manager - Organizational Development**Barker, R., B. Comm. *Memorial*, MBA *Virginia Polytechnic Institute & State University***Manager - Benefits and Pensions**Roberts, G., B.Sc. *Memorial***Team Lead - Advisory Services**Butler, C., B.Comm. *Memorial***MARKETING AND COMMUNICATIONS****Director**Collins, V., B.A. *Memorial***Administrative Staff Specialist II**

Kelly, H.

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## 6 General Information

Memorial University of Newfoundland is the only university in Newfoundland and Labrador. It has campuses in St. John's and in Corner Brook, as well as Harlow, England.

### 6.1 The Beginning

Memorial University College was established as a memorial to the Newfoundlanders who had lost their lives on active service during the First World War; it was later rededicated to also encompass the province's war dead of the Second World War. The College opened its doors on the old Parade grounds in St. John's to a total student body of 55 on September 15, 1925.

### 6.2 University Status

The elevation of the College to the full status of a university was one of the priorities of the first post-Confederation Government. At the initial session of our Provincial House of Assembly, July 13, 1949, the intention of the Government of the day was conveyed by the then Lieutenant-Governor, the Honourable Sir Albert Walsh, in these words from the Speech from the Throne:

"It is considered that Newfoundland should have her own degree-conferring University and you will be invited to consider legislation which would confer upon the Memorial University College the status of a university. It is planned to widen and improve the functions, and thus increase the public usefulness of this institution created originally in honour of our illustrious dead of the First World War."

Royal assent was given the Bill creating The Memorial University of Newfoundland on August 13, 1949, exactly one month to the day from the opening of the House. The Board of Regents and the Senate were inaugurated in May 1950, and the first Convocation of the University was held on June 3, 1950, when the first degrees were awarded.

### 6.3 A Period of Expansion

With university status, Memorial University of Newfoundland entered a period of rapid growth that was to continue into the 70s. In 1949-1950, there was a student body of 307 in the new University; in the academic year 1961-1962, when the University moved to its present campus, the student enrolment had reached 1745 full-time and 152 part-time. Ten years later, 1971-1972, the student population, including full- and part-time students on degree programs, was 10,980.

Meanwhile, there were equally dramatic changes in the variety and extent of available academic programs. In the early years of the University, there were two Faculties (Arts and Science, and Education). While the academic structure was quite similar in 1961, when the University moved to the present campus, areas of instruction, course offerings and degrees awarded had all increased.

Today, the University offers more than 100 undergraduate and graduate degree programs through six Faculties - Arts, Science, Education, Medicine, Engineering and Business Administration; and six Schools - Graduate Studies, Nursing, Human Kinetics and Recreation, Social Work, Music and Pharmacy; and also offers degree programs in Fine Arts. Student enrolment in 2004-05 totalled 17,785.

In 1975, the University established a campus in Corner Brook. The College, in 1979, was named the Sir Wilfred Grenfell College honouring the memory of the medical missionary who pioneered medicine in Northern Newfoundland and along the coast of Labrador. Since its opening, Grenfell has progressed from a junior college offering first- and second-year courses to providing entire degrees in the areas of arts, fine arts, science, and nursing. The first degrees, in the disciplines of theatre and visual arts, were introduced in 1988. Most recently, Grenfell has introduced degree programs in tourism studies and a Bachelor of Education Program (Primary/Elementary) fast-track option. The College currently offers degree programs in 14 disciplines. For more information see [www.swgc.mun.ca](http://www.swgc.mun.ca).

In 1992 the Marine Institute joined the University, becoming the Fisheries and Marine Institute of Memorial University of Newfoundland. Founded in 1964, the Institute offers a range of certificate, diploma and degree programs in fisheries and marine technology and is involved in research and technology transfer. For more information see [www.mi.mun.ca](http://www.mi.mun.ca).

Memorial University of Newfoundland's faculty and students actively participate in research and development. This University is one of the most important research facilities in Atlantic Canada and has developed numerous research programs and facilities that are among the most advanced in the world. For a complete listing of research facilities see [www.mun.ca/research/research\\_units.php](http://www.mun.ca/research/research_units.php).

### 6.4 The Campuses

#### 6.4.1 St. John's

The St. John's campus covers a total area of approximately 220 acres. It is divided by Prince Philip Drive, a four-lane arterial road that runs east to west across the campus. To the south, the boundary is Elizabeth Avenue; to the north, Long Pond and Kelly's Farm. The western boundary follows Westerland Road, west along Prince Philip Drive and north along Wicklow Street; on the east, the campus is bounded by Higgin's Line and adjoins the St. John's Arts & Culture Centre property on Allandale Road.

On the campus to the south of Prince Philip Drive are the Arts and Administration, Science, Chemistry-Physics, Education (G.A. Hickman), Mathematics (Henrietta Harvey), Physical Education, Biotechnology, Facilities Management and Music (M.O. Morgan) buildings; as well as the Queen Elizabeth II Library, Inco Innovation Centre, Paton College residence complex, Burton's Pond Apartments, MUNSU-MUN Child Care Centre, and a number of smaller buildings. The Works recreation complex was opened in 2002,

comprising the Aquarena, Field House and other sports and recreation facilities on campus. Spanning Prince Philip Drive is the Smallwood Centre, containing student services and student union operations, as well as recreation and dining facilities.

North of Prince Philip Drive are the Health Sciences Centre incorporating the Faculty of Medicine, the School of Nursing, the School of Pharmacy, and the General Hospital Corporation; the Engineering (S.J. Carew), the Alexander Murray, the Faculty of Business Administration, and the C-CORE (Captain Robert A. Bartlett) buildings, St. John's College, Coughlan College, Queen's College, Spencer Hall, and the Fisheries and Marine Institute on Ridge Road. The National Research Council's Institute for Ocean Technology is also located on the north side of the campus. Slightly further north is the Memorial University of Newfoundland Botanical Garden. The Ocean Sciences Centre is located to the west at Logy Bay.

### 6.4.2 Corner Brook

Sir Wilfred Grenfell College Campus stands on a magnificent 185-acre site with a spectacular view of the city of Corner Brook and the Bay of Islands. Located on University Drive, Grenfell College's small campus features four academic buildings. The Arts and Science building was the original building which opened in 1975; it houses administrative offices, academic classrooms and labs, recreational facilities, a student residence and bookstore. The Fine Arts building, which opened in 1988, features state-of-the-art facilities for theatre and visual arts programs. The Library and Computing building opened in 1995 and contains the Ferris Hodgett Library, a computer lab and lecture hall facilities. The Student Centre, an annex to the Arts and Science building, opened in 1997, provides dining and recreational space for the student population, as well as the offices of the Grenfell College Student Union. The Forest Centre, which houses classroom, lab and lecture space, as well as the offices of the Western Newfoundland Model Forest, the Canadian Forest Service and other partners, opened in 1998. In 2002, Grenfell College expanded its residence space by opening eight chalet-style apartment buildings.

### 6.4.3 Harlow

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In 1966 the Board of Regents approved the establishment of a small residential campus at Harlow, Essex approximately midway between London and Cambridge. The campus has gone through extensive modernisation in 2002 and the newly refurbished campus is designed to meet the needs of today's students - those from Memorial University of Newfoundland wishing to study in Europe and those in Europe interested in pursuing studies at Harlow Campus. Additionally the campus is now ideally suited for executive programs, corporate retreats and conferences, with technologically equipped meeting facilities and residence accommodations for up to 50, as well as excellent food service capacity.

The main campus building is a converted 19th century Maltings (formerly used for drying barley for brewing) - accommodating 40 students in high quality twin ensuite accommodation, which can be converted to single accommodation when required. In addition there is a purpose designed single bedroom for a disabled guest, with roll in shower and toilet facilities. A further 10 students can be accommodated in Cabot House, a self-contained residence house in a 17th century cottage with 4 twin rooms and 2 single rooms all with shared facilities.

Each bed in both the Maltings and Cabot House has a direct dial inward telephone and computer point with internet access (for use with personal lap-top computers).

The campus has three fully self-contained faculty properties each with one double and one twin room. These are two apartments at 44 and 46 Market Street and St. John's Cottage.

Conference/training space is available in St. John's House, which is the main lecture hall situated in a converted Victorian Schoolhouse. The lecture hall is fully networked and has audio visual connectivity. Flexible seating arrangements means the facility can comfortably accommodate up to 25 delegates. Additional conference/training space is available in the Lord Taylor Room situated in the Maltings. This conference room is fully networked and has flexible seating arrangements accommodating up to 20 delegates.

The Resources Room in the Maltings accommodates the library and small computer suite (which is set up to be additional teaching space when required). An area of the room is designed to be quiet space with study cubicles and comfortable seating.

There are a number of scholarships, bursaries and awards available to students wishing to attend Harlow. For further information refer to the Scholarships, Bursaries and Awards section.

Specific enquires about academic programs offered at Harlow should be directed to the appropriate Dean/Director/Principal or Dr. M. Collins, Associate Vice President (Academic) in writing to the Office of the Associate Vice-President (Academic), Memorial University of Newfoundland, St. John's, NL, A1C 5S7, or by telephone at (709) 737-3259 or (709) 737-8411, or by fax at (709) 737-6978.

General enquiries about the Harlow Campus should be directed in writing to Ms. Sandra Wright, Acting Director, Memorial University of Newfoundland, Harlow Campus Trust, The Maltings, St. John's Walk, Market Street, Harlow, Essex CM17 0AJ, UK., or by telephone at 011 44 1279 455900, or by fax at 011 44 1279 455999, or by e-mail at [hcampus@hcampus.inty.net](mailto:hcampus@hcampus.inty.net).

Up to date information on the campus and academic programs is available on the web page at [www.mun.ca/harlow](http://www.mun.ca/harlow).

### 6.4.4 Fisheries and Marine Institute

Headquartered on Ridge Road in St. John's, the Marine Institute is Canada's leading centre of education, training, applied research and technology transfer for the ocean industries. As part of Memorial University of Newfoundland, Marine Institute offers degrees, advanced diplomas, diplomas of technology, certificates in such fields as marine transportation, food and water quality, naval architecture, aquaculture, coastal zone management and marine environmental.

The institute has a number of state-of-the-art centres and units, including the Offshore Safety and Survival Centre (OSSC), the Safety Emergency and Response Training Centre (SERT), the Centre of Marine Simulation (CMS), the Centre for Aquaculture and Seafood Development (C-ASD), MI International and the Centre for Sustainable and Aquatic Resources (C-SAR). These areas lead to the

institute in applied research and technology transfer and also provide training to a variety of industry clients.

## 6.5 Objectives of the University

The objectives of Memorial University of Newfoundland are: to develop in the province an institution of higher learning deserving of respect for the quality of its academic standards and of its research; to establish new programs to meet the expanding needs of the province; and to provide the means whereby the University may reach out to all the people.

In 1994 the University adopted a mission statement:

Memorial University is committed to excellence in teaching, research and scholarship, and service to the general public.

Memorial University recognizes a special obligation to educate the citizens of Newfoundland and Labrador, to undertake research on the challenges this province faces and to share its expertise with the community.

This mission is at the core of this University's plans for its programs, campuses and activities at home and abroad. To learn more about the University's evolving plans and priorities, see [www.mun.ca/strategicplanning/](http://www.mun.ca/strategicplanning/).

## 6.6 Presidents of Memorial University College

1925 - 1933 Mr. John Lewis Paton

1933 - 1949 Dr. Albert G. Hatcher

## 6.7 Presidents of the University

1949 - 1952 Dr. Albert G. Hatcher

1952 - 1966 Dr. Raymond Gushue

1966 - 1967 Mr. M.O. Morgan (pro tempore)

1967 - 1973 The Rt. Hon. the Lord Taylor of Harlow

1973 - 1981 Dr. M.O. Morgan

1981 - 1990 Dr. Leslie Harris

1990 - 1999 Dr. Arthur W. May

1999 - Present Dr. Axel Meisen

## 6.8 Chancellors of the University

1952 - 1961 The Rt. Hon. the Viscount Rothermere of Hemsted

1961 - 1968 The Rt. Hon. the Lord Thomson of Fleet

1971 - 1979 Dr. G. Alain Frecker

1979 - 1988 Dr. Paul G. Desmarais

1994 - Present Hon. Dr. John C. Crosbie

## 6.9 Chairmen of the Board of Regents (Established May, 1950)

1950 - 1954 Hon. Sir Albert Walsh

1954 - 1968 Dr. Edmund J. Phelan

1968 - 1974 Hon. Dr. Gordon A. Winter

1974 - 1982 Hon. Dr. Frederick W. Russell

1982 - 1991 Dr. Charles W. White

1991 - 1997 Dr. Janet Gardiner

1997 - 2002 Dr. Edward Roberts

2002 - 2003 Mr. Chris Decker

2004 - 2006 Mr. Lorne Wheeler

2006 - Vacant

## 6.10 University Constitution

The Constitution of the University is embodied in an Act of the House of Assembly of Newfoundland entitled *An Act Respecting the Memorial University of Newfoundland*, Chap. 231, Revised Statutes of Newfoundland (as amended). The Act delineates the authority and the functions of the University and its parts, as follows:

There shall be a university which shall be called the Memorial University of Newfoundland, consisting of a Chancellor, Convocation, Board of Regents, Senate, Faculty Councils and the Faculties and which shall be a body politic and corporate. No other university having corporate powers capable of being exercised within Newfoundland shall be known by the same name, nor shall any other university have power to grant degrees.

The University shall have full power and authority from time to time and at all times to establish and maintain such faculties, colleges, schools, institutions, departments, chairs and courses as to the Board of Regents may seem meet, and to give instructions and training; to grant degrees, including honorary degrees, diplomas and certificates of proficiency; to provide facilities for the prosecution of original research in every branch of knowledge and learning and to conduct and carry on such research work; and generally, to promote and carry on the work of a university in all its branches.

### 6.10.1 The Board of Regents

The management, administration and control of the property, revenue, business and affairs of the University are vested in a Board of Regents, consisting of:

1. three ex-officio members
  - a. the Chancellor of the University
  - b. the President of the University
  - c. the Vice-President of the University who is the Pro Vice-Chancellor;
2. six members elected by the Alumni Association of the University;
3. seventeen members appointed by the Lieutenant-Governor-in-Council; and
4. four members appointed by the Lieutenant-Governor-in-Council being full-time students of the University who



- a. meet the requirements set out in the regulations, and
- b. are recommended to the Lieutenant-Governor-in-Council by the board following the recommendation to the board of one candidate each from the following student unions:
  - i. the Memorial University of Newfoundland Students' Union,
  - ii. the Graduate Students' Union,
  - iii. the Marine Institute Students' Union, and
  - iv. the Grenfell College Student Union.

### 6.10.2 The Senate

Matters of an academic character are in general charge of the Senate of the University, consisting of the following:

1. The Chancellor of the University;
2. ex-officio members who shall be
  - a. the President of the University, who shall be the chairman thereof,
  - b. the Vice-President (Academic) of the University, who shall be the deputy chairman thereof,
  - c. the Deputy Minister of Education or his delegate,
  - d. the Principal of the Sir Wilfred Grenfell College,
  - e. the Deans of the Faculties of the University,
  - f. the Dean of Graduate Studies,
  - g. the University Librarian,
  - h. the University Registrar, and
  - i. such other persons holding office within the University or in any of the colleges or institutions affiliated with the University chosen in such number and manner as may be approved by the Board;
3. such members from the academic staff of the Faculties and Professional Schools of the University, exclusive of any person who is a member by virtue of paragraph 2., elected in such number and manner as may be approved by the Board, but the number elected under this paragraph shall be not less than twice the number of members named or chosen under paragraph 2.; and
4. thirteen members from the students in attendance at the University, including at least one student from the Fisheries and Marine Institute, one graduate student and one student from Sir Wilfred Grenfell College with all members to be chosen in a manner approved by the Board.

### 6.10.3 Convocation

Convocation of the University, as provided in the *Act*, is composed of the Chancellor, the President, the Senate, the Board of Regents, all persons who are graduates of the Memorial University College, all persons holding academic appointments with the University whose names are added to the roll of the Convocation by the Registrar of the University from time to time upon instructions from the President, and all persons who have become graduates of the University. The functions of Convocation are chiefly elective, but it may also consider all questions affecting the well-being and prosperity of the University and make representations from time to time on such questions to the Senate, which shall consider the same and return to the Convocation its conclusions thereon.

### 6.10.4 Affiliation

The *Act* provides that, subject to the approval of the Lieutenant-Governor-in-Council, the University may affiliate with any college or institution established in the province for the promotion of Arts and Science, or for instruction in Law, Medicine, Nursing, Education, Engineering, Agriculture or in any other useful branch of learning, and to dissolve any such affiliation. (The institution which has become affiliated with the University under this provision is Queen's College, St. John's).

## 6.11 Queen's College

### 6.11.1 Faculty of Theology

Queen's College, founded in 1841, is an Associate Member of The Association of Theological Schools in the United States and Canada and is affiliated with Memorial University of Newfoundland. It has a Faculty of Theology which offers courses in theology and in professional training for ministry. Under Legislative authority it confers the degrees of Master of Divinity, Master of Theological Studies, and Bachelor of Theology and grants a Diploma in Theology and Ministry and an Associate in Theology.

Further information may be obtained by contacting the College in writing to The Registrar, Queen's College, St. John's, NL, A1B 3R6, or by telephone to (709) 753-0116, or by fax to (709) 753-1214, or by e-mail to [queens@mun.ca](mailto:queens@mun.ca).

## 6.12 Academic Dress

The academic dress for matriculated undergraduates of the University shall be similar to the Scholar's gown of the University of Oxford. It shall be worn whenever the President so directs.

The gowns of the Bachelors shall be of black stuff. The gowns of the Masters shall be of black stuff or silk. The gowns of the Doctors shall be of fine scarlet cloth or silk, or of black stuff or silk.

The pattern of the Bachelor's gown shall be similar to that of the Oxford Bachelor's gown. The pattern of the Master's gown and the Doctor's black gown shall be similar to that of the Oxford Master's gown, except that the Doctor's gown shall have an edging of black silk braid at the opening of the sleeve. The Doctor's scarlet gown shall be similar to that of the Oxford Doctor of Divinity's gown.

The hoods of the Bachelors shall be made of black stuff, the hoods of the Masters of black silk, and the hoods of the Doctors of scarlet silk. They shall be full in shape and lined with the university colours of claret and white. The hoods of the Bachelors shall be trimmed with white fur, the tippets with velvet in the colours distinctive of the Faculty or Degree. The hoods and tippets of the Masters shall be edged with velvet in the colours distinctive of the Faculty or Degree. The hoods and tippets of the Doctors shall be edged with silk in the colours distinctive of the Faculty or Degree; however, the hood of the Doctor of Philosophy shall be of claret silk, lined and edged with claret silk. The distinctive colours for the degrees shall be:

B.A., M.A. - White	B.Sc., M.A.S.P.(Co-op), M.Sc. - Gold
B.A. (Police Studies) - Navy Blue	B.Sc.(Pharm.), M.Sc.(Pharm.) - Clover
B.B.A. - Nutmeg	B.S.W., M.S.W. - Ruby Gem
B.Comm., B.Comm.(Co-op.), M.B.A. - Tan	B. Sp.Ed.Teal - Blue
B.Ed., B.Ed.(Intermediate/Secondary), M.Ed - Light Blue	B. Tech. - Moss Green
B.Ed.(Prim.), B.Ed.(Elem.) B.Ed. (Prim./Elem.) - Royal Blue	B.Voc.Ed., B.Ed.(Post-Secondary) - Steel Gray
B.Ed.(Native and Northern) - Monad Blue	M.D., M.Sc.(Medicine) - Green
B.Eng., M.Eng. - Orange	M.A.S. - Mean Gray
B.F.A.(Theatre) - Amethyst	M.A.Sc. - Sunburst
B.F.A.(Visual Arts) - Green Haze	M.Env.Sc. - Pollen
B.M.S. - Ocean	M.E.R. - Chocolate Brown
B.Mus., M.Mus - Pink	M.M.S. (Fisheries Resource Management) - Emerald
B.Mus.Ed. - Lavender	M.O.G.S. - Umber
B.N., M.N - Coral	M.Phil., Ph.D. - Claret
B.P.E., B.P.E. (Co-op.), B.Rec.(Co-op.), B.Rec., B.Kin.(Co-op.), B.Kin., M.P.E., M.Sc.(Kin.) - Sage Green	M.W.S. - Purple

The caps of Bachelors and Masters shall be black and of the square shape, with black tassel. The caps of the Doctors shall be similar to the Oxford Doctor's bonnet.

The academic dress for the Officers of the University shall be as follows:

**Chancellor** - a silk gown heavily embroidered with gold braid

**Vice-chancellor** - a silk gown embroidered with gold braid

**Pro vice-chancellor** - a silk gown embroidered with gold braid

**Registrar and other Officers of the University** - gowns of a pattern approved by Senate

## 6.13 The University Library

The University Library consists of the Queen Elizabeth II Library, the Health Sciences Library, and the Dr. C.R. Barrett Library, Fisheries and Marine Institute, all in St. John's, and the Ferriss Hodgett Library in Corner Brook. These four units together have a collection equivalent to 2.5 million volumes and more than 26,000 current journal subscriptions. This collection serves as the major information resource for the University as well as the province. All units of the library system may be used by all students, faculty and staff, as well as the community at large.

### 6.13.1 Queen Elizabeth II Library

The Queen Elizabeth II Library was opened for service in January 1982. It is an impressive structure of 200,000 square feet on five levels. It has a seating capacity of 2,000 and can hold 1.6 million physical volumes. The Information Services Division, located on the main floor (second level), provides assistance to people wishing to make use of the library's resources and services. This division provides reference and computer-assisted bibliographic search services. Library tours and individual or group instruction in the use of the library and its resources may be arranged for students through this division. Information Services is part of the Commons, located on the Library's main floor. The Commons is a partnership between Computing and Communications, the Queen Elizabeth II Library, and the Writing Centre. The Commons provides access to print, electronic, and technology resources with the support and expertise needed to help users in the use of these resources. The wall space in the Commons is called First Space and is used to highlight the work of the fine arts students of Memorial University of Newfoundland. The Government Documents Section contains a depository collection of Canadian government documents together with an extensive collection of material from the United States and other countries and international organizations. The Lending Services Division provides interlibrary loan and services to off-campus students as well as maintaining the stacks in the library. The Library's Centre for Newfoundland Studies collects all published material pertaining to Newfoundland and Labrador, as well as manuscript materials. The Music Resource Centre, located in the School of Music, contains scores, records, and listening equipment.

### 6.13.2 Health Sciences Library

The Health Sciences Library is located on the ground floor of the Health Sciences Centre on the north campus of the University. It is a designated Canadian MEDLINE Centre which provides access to computer-assisted searches of the world's biomedical literature on demand in support of clinical, teaching, and research interests.

The Health Sciences Library has a collection of over 40,000 books on medicine, nursing, dentistry, pharmacy and allied health subjects and subscribes to more than 1700 paper and electronic journals. It maintains an audio-visual collection of over 1500 titles, which includes videotapes, slides, microfiche/film and audio cassettes.

### 6.13.3 Dr. C.R. Barrett Library

The Dr. C.R. Barrett Library is located on the main floor of the Fisheries and Marine Institute. It offers a comprehensive range of library and audio-visual services to students, faculty, and staff at the Fisheries and Marine Institute, the College of North Atlantic Engineering Technology Centre and to the Newfoundland and Labrador marine industries.

The library collection supports study and research in fisheries and aquaculture, marine engineering, nautical science, and the aquatic environment. The collection also includes significant holdings in engineering.

Library holdings include 50,000 books and technical reports, 400 current magazine and newspaper subscriptions, print and electronic reference sources, 1,400 films and videos, maps and pamphlets. The collection includes 4,500 ship drawings.

### 6.13.4 Ferriss Hodgett Library

The Ferriss Hodgett Library is located on levels 2 and 3 of the Library & Computing Building, with seating for 203 users and includes group study rooms, audio-visual and computer carrels.

The Library holds over 100,000 books and 450 current subscriptions, along with collections of audio-visual materials, government documents, microforms, periodicals, and access to many e-journals.

A full range of public services is available including reference assistance, orientation tours and interlibrary loans, as well as access to electronic information resources, Internet, spreadsheet, word processing, and presentation software.

## 6.14 Computing and Communications

The Department of Computing and Communications is responsible for centralized computing, data and voice communications, and mail. Services include computing and network operations, consulting, applications development and support, computer labs, web site development and support, and help desk services. Computers supporting a variety of operating systems are available for teaching and research use. Extensive online access to administrative databases is provided.

## 7 Student Affairs and Services

The Dean of Student Affairs and Services is the senior person responsible for the coordination and implementation of support services for students and serves as a liaison between the student body and university administration. The primary goal of the Dean is to promote a welcoming and supportive environment so that students are able to maximize their opportunities for learning and personal development. The Dean provides leadership and direction so that students' educational experiences are enriched by the provision of programs that respond to their intellectual, emotional, occupational, financial, personal, physical and social needs. The Dean is administratively responsible for the divisions of Career Development and Experiential Learning, Counselling, Student Health Service, Student Success Programs, University Bookstore, and Housing, Food and Conference Services. As an advocate for students, the Dean works collaboratively with all members of the university community to ensure that policies, procedures and programs foster the optimal development for all students.

### 7.1 Career Development and Experiential Learning

Career Development and Experiential Learning encompasses a broad range of programs designed to assist undergraduates, graduate students, and alumni of the University explore their career options. The department includes the Centre for Career Development, Cooperative Education Services Centre, Career Planning and the Student Volunteer Bureau.

#### 7.1.1 Centre for Career Development

Career development encompasses a broad range of programs and services that help graduate and undergraduate students and alumni explore their career options. Through the provision of labour market information, employability skills workshops, individual consultations, and employment counselling the Centre for Career Development assists students to gain practical hands on career related experiences through graduate, summer and part-time employment.

The Centre offers workshops to maximize successful job search in the area of personal career development opportunities, resume writing, interview skills, career portfolio development and networking.

The Centre currently markets Memorial University of Newfoundland students to local, national and international employer groups and assists employers with their on-campus recruitment needs. Information sessions, career fairs, guest speakers, and a new mentoring program are provided to assist students to ease their transition to the world of work and gain practical career experience.

Position postings for summer, part-time and graduate employment are posted throughout the year at the Centre. Students are encouraged to check the Centre postings on a regular basis. The Centre for Career Development is located on the fourth floor of the Smallwood Centre.

#### 7.1.2 Career Planning Centre

An appropriate career choice appears to be a major contributor to students' satisfaction with their performance in university. The Career Planning Centre, located at UC4002, serves as a drop-in centre designed to help students in such areas as gathering information relevant to educational and career goals, performing self-exploration of career-related interests, clarifying values, acquiring more effective decision-making strategies, and developing both short and long-term career plans. The Centre is open daily from 9:00 a.m. to 5:00 p.m. Students are encouraged to stop in and acquaint themselves with the Centre's resources.

#### 7.1.3 Co-operative Education Services Centre (CESC)

The Co-operative Education Services Centre (CESC) is responsible for providing a range of services common to all co-operative education programs at the University. This includes developing and maintaining business and government participation in the co-op programs; assisting the job placement process for more than 700 students per semester, encouraging the development of professional and scholarly skills pertinent to co-operative education; designing and implementing an integrated automated office information system, administering the Offshore Career Awards Program, the Small Enterprise Co-operative Placement Assistance Program (SECPAP), the new entrepreneurship awards.

## 7.2 Student Success Programs

Student Success Programs is responsible for the development and administration of programs and activities for students, the identification and assessment of emerging campus trends, long range and strategic planning, fostering and supporting campus leadership as it relates to student governments, campus societies and campus policy development for students.

Student Success Programs works closely with students, staff and faculty and the community at large to maximize the quality of student and academic life for students. Student Success Programs is comprised of the following speciality areas:

### 7.2.1 Answers: Centre for Student Life

ANSWERS, Centre for Student Life provides the following programs: Orientation for students and parents, Leaders involved in Further Education (LIFE) and Student Ambassador. ANSWERS also offers: numerous student leadership opportunities including Peer Orientation Assistants, Leader Forum, and Horizons. The centre also offers distribution of Canada - Newfoundland and Labrador Student Loans Program, Campus Cards, and Locker Services. To learn more about the programs and services or to join the listserv simply sign on to the website at [www.mun.ca/answers/about](http://www.mun.ca/answers/about), visit the centre at UC3005, telephone (709) 737-7461, or email

answers@mun.ca.

### 7.2.2 Native Liaison Office

In cooperation with the Labrador Inuit Association, native students are provided a range of services to assist with the university experience. Inquires may be made in-person at UC4003 or by telephone number to (709) 737-2118.

### 7.2.3 Scholarships, Awards and Financial Aid

Student Affairs and Services administers the Scholarships and Awards Program for the University, distributes out of Province Financial Aid, and emergency financial aid. Inquiries may be made in-person at UC4018 or by telephone at (709) 737-7910.

## 7.3 Student Financial Services

Information regarding the Canada - Newfoundland and Labrador Student Loans Program is available from Student Financial Services, Department of Education, located in Coughlan College. Student Financial Services can be reached by telephone at (709) 729-4244/5849, email at studentaid@gov.nl.ca or through the website at [www.edu.gov.nl.ca/studentaid/](http://www.edu.gov.nl.ca/studentaid/).

## 7.4 International Student Advising

The International Student Advisor is located in Corte Real, Burton's Pond Complex, Room C 1000 and can be reached at (709) 737-3447. Reception and orientation of new foreign students are two of the major functions of the Advisor, as well as providing information and advice concerning their stay in Newfoundland and Labrador. New students must meet with the International Student Advisor upon arrival for advice concerning their stay at the University and their compulsory health insurance program. Further information may be obtained through the website at [www.housing.mun.ca/isa](http://www.housing.mun.ca/isa).

## 7.5 University Bookstore

The University Bookstore is the on-campus site for text, reference and general reading. The Bookstore carries stationery, school supplies, crested clothing, backpacks and memorabilia. Distance Education students are to order textbooks through Bookstore website. The University Bookstore is located at UC2006, telephone at (709) 737-7440, or website at [www.bookstore.mun.ca](http://www.bookstore.mun.ca).

## 7.6 Counselling Centre

The primary function of the Counselling Centre is to help students release, develop or direct their personal capabilities. Through individualized personal counselling and a wide range of programs, students are encouraged and helped to develop their own unique resources and thereby promote personal growth and intellectual development. The Centre also serves as a training centre for advanced students in a number of helping professions. Services will be offered free of charge to students in three basic areas.

### 7.6.1 Learning Enhancement Programs

Through a number of short groups and structured activities, students may actively enhance their learning capabilities. Most of the learning programs offered train participants to employ a number of organizational techniques to comprehend and, later, to recall important concepts. Specific programs offered through the Centre apply these ideas to the areas of Speed Reading and Comprehension, Organizing Ideas for Term Papers and Essays, and Oral Communication.

### 7.6.2 UCC 2020: Applied Cognitive and Affective Learning Strategies for Undergraduate Students

An introduction to cognitive and affective learning strategies and techniques with an emphasis on the application of these techniques in the students' own learning repertoires together with an overview of relevant research from cognitive psychology and related fields. Topics covered will include information processing, memory, forgetting, problem solving, metacognition, general and specific learning strategies, learning styles, and affective strategies (3 credit hours).

### 7.6.3 Individual and Group Counselling for Other Personal Concerns

In addition to individualized personal counselling, the Centre offers specialized group and/or training programs. For many students the fear of testing, fear of asserting one's self and continued mental and physical stress can lead to poor academic performance or personal problems. These, and other such difficulties, can be dealt with on either an individual or group basis, depending upon the student's wishes. The Counselling Centre routinely offers a variety of groups: Assertiveness Training, Developing Healthy Relationships, and Test Anxiety. Other groups offered include both men's and women's support groups, counselling groups for women who have been sexually abused as children, and groups for students experiencing grief or loss.

### 7.6.4 Psycho-Educational Testing

A psycho-educational assessment program is offered on a fee-for-service basis for students seeking academic accommodations.

The Counselling Centre is located in the Smallwood Centre, and is open 9:00 a.m. to 1:00 p.m. and 2:00 p.m. to 5:00 p.m. (4:30 p.m. in the summer), Monday through Friday. All services are free of charge to students and appointments can be made in person at UC5000, or by telephone (709) 737-8874, or email at [counselc@mun.ca](mailto:counselc@mun.ca), or by visiting the website at [www.mun.ca/counselling/home/psychoed.php](http://www.mun.ca/counselling/home/psychoed.php).

### 7.6.5 Glenn Roy Blundon Centre

The Blundon Centre coordinates on-campus services for students with disabilities and those with short-term illnesses and injuries. Services and accommodations include: assistance arranging alternative accommodations for tests and exams (medical or psycho-educational documentation is required), access to adaptive technology and software, orientation of new students, in-servicing of faculty and staff regarding disability issues and special accommodations, note-taking assistance (NCR paper), provision of keys to wheelchair elevators and lifts on campus, and a liaising network between students, faculty, staff, and community groups. Copies of the Campus Physical Accessibility Guide and Partnerships to Access Learning: a resource guide for students with disabilities, faculty and service providers are available. The Glenn Roy Blundon Centre is located at UC4007. For further information, contact the Blundon Centre at (709) 737-2156 (Voice), (709) 737-4763 (TTY), email at [blundon@mun.ca](mailto:blundon@mun.ca), or the website at [www.mun.ca/student/disabilities](http://www.mun.ca/student/disabilities).

### 7.6.6 Campus Ministries

The Campus Ministries is currently comprised of chaplains representing the Anglican/United, Salvation Army, Pentecostal and Roman Catholic denominations. Campus Ministries attempts to provide resources, guidance and support for members of the university community. The chaplaincy also seeks to bring a faith dimension to contemporary issues such as peace, justice, technology and science. The chaplains offer individual pastoral counselling as well as joint programs including weekly workshops, discussion groups, social activities and worship opportunities. Schedules of events are available from the chaplains or from the Internet at [www.mun.ca/student/campusmin](http://www.mun.ca/student/campusmin). Campus Ministries is located at UC4010.

### 7.6.7 Wellness Education

Wellness Education co-ordinates a broad range of health and wellness services for the student community. Our main mission is to raise awareness to the many self-care skills needed for all. Our programs consist of the peer helper program and the many other outreach events organized by this office. Located in the Counselling Centre, wellness education works in collaboration with various campus and community organizations to help facilitate wellness promotion at the University.

Inquiries may be made in-person at UC5002A, by telephone to (709) 737-2659, or through the website at [www.mun.ca/counselling/student\\_wellness](http://www.mun.ca/counselling/student_wellness).

## 7.7 Student Health Service

The staff at Student Health Service are available to provide comprehensive health care and to assist students in taking responsibility for their own health. Primary functions of the Service are the diagnosis and treatment of illness, the activation and maintenance of wellness and the promotion of health education programs.

The Student Health Service is located on the fourth floor of the Smallwood Centre, and is open Monday through Friday, 8:30 a.m. to 5:00 p.m. (4:30 p.m. in summer) by appointment only, except for emergencies.

### 7.7.1 Medical Services

Services provided include:

1. diagnosis and treatment of: physical illness, emotional problems, sexually transmitted diseases, injuries;
2. individual counselling on various aspects of health and wellness: smoking, fitness, weight control, nutrition, alcohol and drug abuse;
3. referral to: specialists, physiotherapists, hospital diagnostic services, other health care agencies;
4. reproductive health: pap smears, contraception, pregnancy - testing, referral services;
5. Injury rehabilitation programs;
6. AIDS (HIV antibody) testing: confidential blood tests, pre-test counselling, post-test counselling;
7. "Medicals" (non-insured service): pre-employment, pre-admission to professional schools, SCUBA diving, driver's license, TB skin test;
8. Educational materials on health issues
9. MCP information and application forms
10. Vaccinations

### 7.7.2 Medical Records

All students' medical records are strictly confidential. No information is released without the request and written consent of the student.

### 7.7.3 New Students

Students are encouraged to bring a copy of their medical records to the Student Health Centre. This is especially important for students who:

1. have chronic or recurrent illness, e.g. asthma, diabetes, inflammatory bowel disease, seizure disorders;
2. require refills of prescription drugs;
3. have a physical disability, e.g. cerebral palsy, spina bifida, visual or hearing impairment; or
4. have a history of mental illness.

### 7.7.4 Payment

The University will bill the appropriate paying agency for the eligible medical services received at the Student Health Service.

### 7.7.5 Newfoundland and Labrador Students

MCP cards are required.

### 7.7.6 Students From Other Canadian Provinces

Students from other Canadian provinces are required to bring their provincial medicare cards.

### 7.7.7 International Students

International students are required, before the start of classes, to purchase a university medical insurance plan. International students with a dependant child must purchase the family plan. The premium for the academic year is calculated once a student registers and must be paid before the start of classes. A personal medical insurance certificate will be issued by the International Student Advising Office and must be presented by the student each time medical or hospital services are required. The student must also sign a claim form for each medical or hospital service rendered.

### 7.7.8 Medicals

"Medicals" (pre-employment, SCUBA, driver's licence, life insurance, etc.) are not covered by insurance plans and must be paid for by the student.

## 7.8 The Students' Union

The Memorial University of Newfoundland Students' Union Act, 1968, which incorporated the Students' Union, defines the objectives of the Union (MUNSU) as follows: to promote artistic literacy, educational, social, recreational, charitable and sporting activities for the advancement of the interests of its members and others; to act as the official organization of the students of the University; and to coordinate, promote and direct the activities of the students of the University.

The MUNSU motto is Students Serving Students. Based on this motto the Students' Union operates a range of services that improve the quality of student life: the Copy Centre, The Attic (Used Bookstore and Postal Service), Health and Dental Insurance, Safe Drive/WalkSafe, the MUNSU Student Planner, Breezeway Bar, and CHMR-FM Radio. The cost of services are partially funded by MUNSU fees that are paid by each undergraduate student upon registration.

MUNSU assists students on an individual basis to resolve student aid, as well as academic-based problems. Through the offices of the Vice President External and the Vice President Academic, problems with appeals, assessments, repayment and general complaints in these areas are addressed.

The Students' Union offers free legal services to students during a semester and a legal aid supervisor is available for appointment. Students are advised to contact the MUNSU General Office for legal aid office hours. Please note that these sessions are not considered extended legal counsel. Students who have more serious issues may be referred to the MUNSU lawyer, for one free session, per issue, per semester.

MUNSU has established and provides funding for a number of Centres on campus: Women's Resource Centre (WRC); International Students Centre (ISC); Lesbian, Bisexual, Gay and Trans-gendered Resource Centre (LBGT-MUN); MUN DISC (Disability Info & Support Centre); Students Older Than Average (SOTA), Student Parents at MUN (SPAM), and the Aboriginal Centre.

The Students' Union is also a member of the Canadian Federation of Students (CFS) representing over 450,000 students across Canada. Visit MUNSU on the World Wide Web [www.mun.ca/munsu](http://www.mun.ca/munsu).

## 7.9 Childcare Centres

The Students' Union operates four non-profit Childcare Centres for children ranging in age from two to ten years.

These centres situated in the MUNSU/MUN Childcare Building (next to Burton's Pond), are fully licensed by the provincial government, and strictly adhere to all provincial regulations.

Although these centres serve the entire university community, children of full-time students are given priority for the Fall Semester if their application is on file at the centre by April 30 of that year.

For further information telephone (709) 737-4728/4729.

## 7.10 Students' Union Fee

All full-time and part-time undergraduate students of the University pay a compulsory students' union fee and all students, upon registration, automatically become members of the Students' Union.

## 7.11 The Graduate Students' Union

The Graduate Students' Union (GSU) at Memorial University of Newfoundland is an organization run for graduate students by graduate students. Founded in 1967, the GSU is one of Canada's oldest independently incorporated graduate student governments. Every graduate student at the University becomes a member of the GSU upon registration. Presently, the graduate student body consists of over 2000 full and part-time students, thereby comprising approximately 10% of the total student population at Memorial University of Newfoundland.

The Graduate Students' Union has two main functions: 1) to represent and protect the interests of the graduate students at all levels of university governance, and 2) to help enhance the quality of graduate student life at Memorial University of Newfoundland. Graduate student fees, presently \$20 per semester per student, provide the GSU with an annual operating budget. These fees are used to run the GSU office, help finance social and academic events for graduate students, provide conference aid for students presenting at conferences, and to cover other operating expenses.

The Graduate Students' Union is run by a Board of Directors consisting of the five GSU Executive officers and one student representative from each academic unit with a graduate program. Additionally, graduate students who sit on various university committees regularly attend. The Board meets once a month to assist the Executive in guiding the development and direction of the organization. The Board meetings also give students a chance to raise concerns from their individual departments and in return, to receive advice or suggestions on problem solving. These meetings are the main line of communication between the Executive officers and the graduate student population at the University. It is for this reason, that the GSU needs an active and interested Board of Directors. Graduate students who are interested in getting involved are always welcome, and should speak to their department representative, or contact the GSU office.

The Graduate Students' Union is located in Feild Hall on the north side of campus. Operated by the GSU, Feild Hall is comprised of four floors: the top two floors for a graduate student residence, one floor for departmental graduate student offices and GSU offices, and the ground floor for Bitters - Restaurant and Lounge, the pub owned and operated by the GSU.

The Graduate Students' Union general office is located on the second floor of Feild Hall in room GH 2007. Office hours are posted outside the office door, on the answering service, and the website. You can reach the GSU by phone (709) 737-4395, by fax at (709) 737-3395, by email [gsu@mun.ca](mailto:gsu@mun.ca), or by writing to Graduate Students' Union, Feild Hall, GH2007, 216 Prince Philip Drive, St. John's, NL, A1B 3R5. Further information about the GSU can be obtained from the website at [www.mun.ca/gsu](http://www.mun.ca/gsu).

## 7.12 Canadian Forces University Training Plans

Selected students may qualify for financial assistance through these Canadian Forces University Training Plans: the Regular Officer Training Plan (ROTP), the Regular Officer Training Plan (ROTP-Coop), the Dental Officer Training Plan (DOTP), the Medical Officer Training Plan (MOTP), and the Reserve Entry Scheme Officer (RESO). Full details may be obtained in writing to the Canadian Forces Recruiting Centre Detachment St. John's, Sir Humphrey Gilbert Building, 165 Duckworth Street, St. John's, NL or the Canadian Forces Recruiting Centre Detachment Corner Brook, CIBC Building, 9 Main Street, Suite 203, Corner Brook, NL.

## 7.13 Firearms On Campus

Students are reminded that firearms (including air-rifles, air-guns and sling shots) may not be brought into, or used in, any part of the University except the rifle range.

## 7.14 Housing, Food and Conference Services

It is the personal responsibility of each student to locate accommodation on or off the campus. The University will provide such assistance as it can through the Housing, Food and Conference Services. Accommodation on campus is available at Paton College and Burton's Pond Apartments.

For good cause, the University reserves the right to refuse admission to university housing to any individual, and to require the withdrawal of any individual who has been admitted to university housing.

### 7.14.1 Paton College

Offers of rooms at Paton College are conditional on students being accepted and registered at Memorial University of Newfoundland or the Fisheries and Marine Institute. Students who are not accepted to the University must notify the college officer of their intention to cancel accommodations. Paton College consists of ten residence houses and has accommodations for 982 students. Traditional housing consists of single gender and co-ed housing.

While Housing, Food and Conference Services oversees the operation of Paton College, all houses are administered internally by representatives of both Housing, Food and Conference Services and the students. Each house is under the supervision of a Proctor, who is responsible for ensuring the smooth running of the residence. The Proctor is assisted by several Resident Assistants, who reside on each floor. Each residence also elects a House Committee comprised of students to represent the house in various matters, and to organize social and recreational activities in the residence. An Academic Don is also appointed for each residence by Housing, Food and Conference Services. The Don is responsible for co-ordinating academic support programs in residence including the supervising of computer room and a free tutoring program. The Residence Life peer helpers provide information concerning wellness issues through awareness campaigns and special events. Student leadership opportunities and employment are offered in the form of resident assistant, academic Don, student assistant and MUCEP positions.

Most rooms in Paton College are double occupancy. Only students who have spent a minimum of two terms in residence, including the most recent academic term, are eligible for a single room. Eligibility for single rooms will be determined by number of terms spent in Paton College, number of university credit hours, and academic performance.

The top floor of most Paton College houses have been designated as quiet floors and stereos are permitted on low volume in these areas. Students who prefer to live in a section where quiet standards are maintained, should request a quiet floor on their application form. While regular floors do not have 24 hour quiet hours, there are designated quiet hours for studying. All Paton College Residences are designated as smoke free. Students with special needs may be accommodated. There are a limited number of wheelchair accessible rooms. Students with other special needs are encouraged to contact us to determine whether Paton College can meet their individual requirements.

All students of Paton College are required to purchase a meal plan as a condition of residency. Special diets may be arranged for students with medical conditions provided they have proper documentation. The university cannot guarantee an allergen free environment.

Mail service is available to all residents. Students are responsible for their own personal items, such as soap, towels, and linens.

Most houses are connected to an extensive underground tunnel system that allows students access to most of the university's facilities.

Each house has a television room, computer room, study lounge, games room, and laundry facilities. Several residences also have exercise and weight rooms, furnished guest lounges, and snack canteens. Pay telephones are available on each floor or students may make arrangements to have their own phone installed.

#### 7.14.1.1 Applications for Residence

Application for residence may be made by any eligible person at any time. Application forms are available in writing to the Housing, Food and Conference Services, 9-309 Hatcher House, Memorial University of Newfoundland, St. John's, Newfoundland and Labrador, A1B 3P7, or by telephone to (709) 737-7590, or by e-mail to [housing@mun.ca](mailto:housing@mun.ca), or through the website at [www.housing.mun.ca](http://www.housing.mun.ca).

A \$20 processing fee is required of all students each semester. This fee is non-refundable non-transferable and will not be credited to the applicant's financial account.

Confirmation fees are creditable and may be refunded when all conditions pertaining to this fee are met.

Application for summer session may be made any time and must be accompanied by a non-refundable, non-creditable \$20 processing fee.

#### 7.14.1.2 Assignment to Residence

Returning students of the Fall and Winter Semesters and work term students as defined by the Division of Co-ordination, with a GPA of 2.0 or higher, will receive assignment preference over all other applicants if they adhere to the schedule under Residence Terms.

Students entering the University as first-year students, as well as students transferring directly to St. John's from Sir Wilfred Grenfell College or the community colleges, will receive assignment preference over all remaining applicants.

All other applicants, including Spring Semester and Summer Session residence students, will be considered and assigned by date of receipt of their application.

Notwithstanding the foregoing, the University reserves the right to make residence/room assignments and/or changes other than those stated as preference on the application.

#### 7.14.1.3 Residence Terms

(See the University Diary section of the University Calendar for exact dates.)

Fall Semester - September to December

Intersession - May to June

Winter Semester - January to April

Summer Session - July to Mid-August

Spring Semester - May to August

#### 7.14.1.4 Returning Students - Fall Semester

Returning students for the Fall Semester must apply for accommodations by March 15. A \$20 processing fee will be charged to their university student account. This fee is non-transferable, non-refundable, and non-creditable. At this time an acceptance form to Paton College is signed. If it becomes necessary for an applicant to cancel a confirmed assignment, it must be done on or before May 15. Failure to cancel a room assignment by May 15 will result in a \$300 cancellation fee being charged to the student's financial account.

with the University.

#### **7.14.1.5 New Students - Fall Semester**

Assignments will be mailed to the earliest applicants during late February. Confirmation form and fee of \$200 must be received by Housing, Food and Conference Services no later than May 1, otherwise the house assignment will be cancelled and the space re-assigned. If it becomes necessary for an applicant to cancel a confirmed assignment, it must be done not later than May 15 to be eligible for a refund of the confirmation fee. Failure to cancel a confirmed assignment by May 15 will result in the forfeiture of the \$200 confirmation fee.

All new students entering Paton College will be required to sign a lease for two semesters (Fall and Winter).

#### **7.14.1.6 New Students - Winter and Spring Semesters**

Assignments will be mailed as vacancies occur. Confirmation form and fee of \$200 must be received by Housing, Food, and Conference Services within specified deadline dates. Where confirmation forms and confirmation fee are not received within this period the assignment will be cancelled and the space re-assigned.

Once assigned a house, the onus is on the student to cancel the assignment if the space is not required. Cancellation of confirmed assignments will result in the forfeiture of the \$200 confirmation fee. If a student fails to register for his or her room at the beginning of the semester, commonly referred to as a "no show" he or she will not normally be granted an appeal and will automatically be charged a cancellation fee.

#### **7.14.1.7 Assignment Preference List**

When all rooms of the College have been assigned, applicants to a maximum of 200 males and 200 females, who cannot be offered accommodation, will be placed on an assignment preference list. It is essential that individuals on the list give the Housing, Food, and Conference Services a local address and telephone number at which they can be contacted on short notice. Housing, Food, and Conference Services can give no assurance that a room will be available to all those on the assignment preference list; for this reason, all individuals on this list should make their own arrangements for alternate accommodation. It should be noted that the processing fee is non-refundable and non-creditable.

#### **7.14.1.8 Occupancy of Rooms and Meal-Ticket Coverage**

##### **First-year students**

Occupancy of rooms extends from the day before registration until 12:00 noon the day after the last regularly scheduled undergraduate examination.

Meal tickets are valid from the breakfast meal on the day following the first day of Paton College registration. The ticket expires with the evening meal on the day of university's last regularly scheduled examination.

##### **7.14.1.9 Accommodation Between Semesters**

Residence fees cover the period of a particular semester only. Those residents who have a valid requirement to be in residence between semesters may be provided sleeping accommodation if space is available and approved by the Housing, Food, and Conference Services.

An additional charge for such accommodation will be applied to the student's account. No refunds will be issued.

Students may be required to remove their personal belongings from their rooms for the Christmas period or other recesses when required.

Housing, Food, and Conference Services reserves the right to deny accommodation outside the normal semester period if space is needed for other purposes.

##### **7.14.1.10 Residence Fee and Meal Charges**

All accommodation at Paton College is on a room-and-board basis. All students in Paton College are required to purchase a 10, 14 or 19 meal plan that follows Canada's Food Guide. As the food contract is negotiated each year and residence fees are subject to inflationary trends, refer to the section of the University Calendar headed Fees and Charges to determine cost of accommodation.

##### **7.14.1.11 Withdrawal From Paton College**

All registrants in Paton College will be required to sign an eight month lease.

1. No refunds will be issued to students.
2. Students are responsible for all fees and charges for both the Fall and Winter Semesters.

##### **7.14.1.12 Burton's Pond Apartments**

In addition to Paton College, the University operates an apartment complex at Burton's Pond on the University campus. There are four apartment buildings for single students: Guy, Gilbert, Cartier and Cabot Courts. Fifteen two-bedroom family units are contained in Baltimore Court, and there is a service building - Corte Real Court - containing a computer room, a laundry centre, and students' mail boxes which are accessible to residents 24 hours a day. The Housing, Food and Conference Services office for Burton's Pond Apartments is located in Room 309, Hatcher House. Spaces are limited and are allotted on a first come first served basis, students are encouraged to apply early. Each apartment unit in the four "single students" buildings is occupied by four students, each of whom has a private bedroom and shares the kitchen, living room and bathroom. Burton's Pond accommodates both graduate and undergraduate students. Each student is required to sign an occupancy agreement for the partial occupancy of an apartment.

Residence in the apartments is normally limited to students of 19 years of age or over who have a minimum of 30 university credit hours. Students entering the University for the first time or who have less than 30 credit hours and wish to stay in Burton's Pond when they meet the requirements, should not delay in submitting an application. Applications outside of these regulations may be submitted for the approval of Director of Housing, Food, and Conference Services. The four residences can provide accommodation for 512 students. Once this accommodation has been assigned, applicants to a maximum of 100 males and 100 females who cannot be offered accommodation will be placed on a waiting list.

Baltimore Court has 15 Family units, and the student is required to sign an occupancy agreement. Each apartment is furnished and contains a living room, a kitchen, two bedrooms, and a bathroom. The second bedroom is designed for one child. All apartments in Baltimore are assigned on a priority basis.

The processing fee is non-refundable and non-creditable in all instances. Except for the restriction on first-year students and waiting list maximums, the same basic procedures apply for Assignment to Residence, Residence Terms and Offers of Accommodations, New



Applicants.

Eligible students wishing to apply may obtain further information and application forms in writing to the Housing, Food, and Conference Services Office, Memorial University of Newfoundland, St. John's, Newfoundland and Labrador, A1B 3P7, or by telephone to (709) 737-7599, or by e-mail to burtons@mun.ca, or through the website at www.housing.mun.ca/bp.

#### 7.14.1.13 Off-Campus Housing

The University operates an on line off-campus housing operation consisting of rooms for rent, bed sitting rooms, apartments/apartment buildings to rent/share, and houses to rent/share. The University operates as an information source only to provide students with a listing of potential housing arrangements. The University does not take responsibility for inspecting these accommodations.

## 8 Special Divisions and Separately Incorporated Entities

### 8.1 Archaeology Unit

#### Members

Deal, M., Anthropology, Chair  
 Brown, S.C., Anthropology  
 Gaulton, B., Anthropology  
 Jerkic, S.M., Anthropology  
 Pocius, G.L., Folklore  
 Pope, P., Anthropology  
 Ramsden, P.G., Adjunct Professor  
 Rankin, L., Anthropology  
 Renouf, P., Anthropology, Canada Research Chair, North Atlantic Archaeology  
 Tuck, J.A., Anthropology, Professor Emeritus  
 Whitridge, P., Anthropology  
 Noseworthy, G., Curator of Collections  
 Mathias, C., Conservator  
 Wells, P., CRC Research Assistant

The Archaeology Unit was established in 1978 as a unit of the Faculty of Arts within the Department of Anthropology. It provides an administrative structure in which the teaching and research programs in archaeology can be strengthened by the formal participation of scholars in cognate departments. It has the following aims:

1. To bring together those scholars interested in archaeology as a means of understanding the past.
2. To create a program of study providing a thorough understanding of the techniques of archaeology, the various theoretical perspectives to which archaeology may contribute, and a knowledge of other disciplines which may contribute to our understanding of the past.
3. To co-ordinate and conduct archaeological research, both prehistoric and historical.
4. To establish laboratory facilities and to employ personnel for the conservation of artifacts.
5. To maintain liaison with relevant public agencies and private organizations.

### 8.2 Bridges

Located at the Fisheries and Marine Institute, Bridges, the Marine Technology Alliance Building and Marketing Initiative, will provide \$2.35 million to help Newfoundland and Labrador's Centres of Excellence promote their marine technology capabilities and help stimulate the growth of the province's marine technology industry.

The Centres of Excellence, in collaboration with industry, will submit proposals to Bridges in order to promote their capabilities nationally and internationally. Bridges will assist the Centres of Excellence in competing and succeeding in the global marketplace by fostering the partnerships and alliances necessary to access new markets and generate wealth in the province.

The organizations and facilities generally known as the Centres of Excellence, that would be expected to benefit from this initiative include the Center for Marine Simulation (CMS), Offshore Safety and Survival Center (OSSC), Center for Sustainable Aquatic Resources (CSAR), Center for Aquaculture and Seafood Development (CASD), Center for Earth Resources Research (CERR), Ocean Sciences Center (OSC), Ocean Engineering Research Center (OERC), Telemedicine and Educational Technology Resources Agency (TETRA), Center for Offshore and Remote Medicine (MEDICOR), C-CORE, NRC - Institute for Ocean Technology (IOT), and the College of the North Atlantic - Engineering Technology Center.

The initiative is located at the Fisheries and Marine Institute and is managed by a six person Board of Directors, made up of industry, academia and government representatives and a small secretariat. This initiative is financed by the Canada - Newfoundland and Labrador Offshore Development Fund (CNODF).

#### Board of Directors

Shinkle, L. (Chair)  
 President, Cartwright Holdings Ltd.  
 Henley, J.  
 President, Newfoundland Transshipment Ltd.  
 Hogan, D.  
 Assistant Deputy Minister  
 Department of Innovation, Trade and Rural Renewal  
 Loomis, Dr. C.  
 Vice-President, Research, Memorial University of Newfoundland  
 Martin, K.  
 Director of Business Programs, Atlantic Canada Opportunities Agency  
 Williams, Dr. M.  
 Director General, Institute for Ocean Technology

#### Staff

##### Executive Director

Gall, N.T., B.Comm (Co-op) *Memorial*, M.B.A. *McGill*, MCPM *UQAM*

### 8.3 Canadian Centre for Fisheries Innovation (CCFI)

Located at the Fisheries and Marine Institute, the Canadian Centre for Fisheries Innovation is owned by Memorial University of Newfoundland and supported by the Atlantic Innovation Fund. The Centre provides scientific research and technology services to the fishing industry in Atlantic Canada. Working closely with the faculty and staff of the region's universities and technical institutes, the Centre provides expert assistance in the areas of aquaculture, harvesting and processing, with the aim of enhancing the industry's productivity and profitability. CCFI's activities also include resource conservation research, equipment development and marine biotechnology. The Centre's services are available to anyone in the fishery or aquaculture industry who wishes to overcome obstacles or meet opportunities through science and technology.

CCFI is an organization structured to meet the needs of the industry quickly and efficiently. The Industrial Liaison Officers collaborate directly with clients to develop and execute industrially relevant research and development projects.

#### Mandate

The organization works with industry clients to identify needs. It then collaborates with the scientific and technological faculty and staff of the universities and technical colleges of Atlantic Canada to devise solutions to meet those needs. CCFI works to ensure that the initiatives are organized, on time and directed to address the specific needs of the industry clients. The Centre also funds these projects, when required.

The Centre's research and development undertakings cover all areas of importance to the fishery and aquaculture industry:

1. Environmentally Sustainable Harvesting
2. Food Safety Systems
3. Utilization of Fish Waste
4. Improved and More Efficient Fishing Platforms
5. Human Resource/Technology Applications
6. Alternative Fish and Shellfish Species for Aquaculture
7. Efficiency and Profitability in Aquaculture
8. Resolving Environmental Issues in Aquaculture

With strong representation from industry, the Board of Directors oversees the direction and mandate of the Centre to ensure that its work is always relevant to the needs of the fishery.

#### Board of Directors

Mr. Gabe Gregory, Chairperson  
Quinlan Brothers, St. John's, NL

Mr. R. Andrews  
Fishery Products International, Ltd., St. John's, NL

Mr. A. O'Rielly  
Managing Director, Canadian Centre for Fisheries Innovation

Mr. W. Apold  
TAVEL Group, Halifax, NS

Mr. D. Bonnell  
School of Fisheries, Fisheries and Marine Institute, St. John's, NL

Mr. R. Butler  
Cooke Aquaculture, St. George, NB

Mr. G. Chidley  
Independent Harvester, Renew's, NL

Ms. Caroline Davis  
St. Anthony Seafoods, St. Anthony, NL

Ms. S. Coady  
Bonaventure Fisheries, St. John's, NL

Mr. J.G. D'Entremont  
Fisheries Resource Conservation Council, Ottawa, ON

Ms. H. Evans  
Fishery, Food and Allied Worker's Union, St. John's, NL

Mr. F. Hennessey  
Independent Harvester, Souris, PEI

Mr. G. Hognason  
Clearwater Fine Foods, Halifax, NS

Mr. K. Kenny  
Marport, St. John's, NL

Dr. R. Lucas  
Dean of Science, Memorial University of Newfoundland, St. John's, NL

Dr. R. Ritchie  
Research and Productivity Council, Fredericton, NB

Mrs. S. Roach-Albert  
Stolt Sea Farm, St. George, NB

Mr. S. Roche  
Consultant, St. John's, NL

#### Management and Administrative Staff

##### Managing Director

O'Rielly, A., B.Comm., *Memorial*

##### Executive Assistant

Horan, C., B.A., *Memorial*

**Industrial Liaison Officer, Aquaculture**Kielly, M., B.A., B.Comm, *Memorial***Industrial Liaison Officer, Processing and Harvesting**

Bonnell, C., B.Sc., Advanced Diploma, Fisheries Development

**Industrial Liaison Officer, Maritimes**Chapman, A., B. Comm., *Memorial***Secretarial Officer**

Brophy, A.

**Accountant**Kearsey, M., B.A., *Memorial***8.4 Canadian Centre for Marine Communications (CCMC)**

Located at the Fisheries and Marine Institute, CCMC is an independent ocean technology support organization that provides financial, technical and marketing support to Canada's ocean technology community. Its mission is to continually improve the competitiveness of Canada's ocean technology community. CCMC accomplishes this through a series of programs and initiatives. Through our technology development programs, we offer financial assistance. Through a series of initiatives delivered under the headings of industry development and business development, we provide technical support and help build capacity in our national ocean technology community and develop international opportunities for our network members at home. Our network members include all Canada's ocean technology community players.

**Board of Directors**

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Associate, Policy Insights Inc.

L. G. O'Reilly (Vice-Chairman)

Executive Director (Retired), The Fisheries and Marine Institute of Memorial University of Newfoundland

N. Chaulk

President, International Communications and Navigation (ICAN)

R. Gillespie (Secretary)

Vice President, CCMC

M. Kearsey (Treasurer)

Manager, Corporate Affairs, CCMC

P. Lacroix

Managing Director, Canadian Centre for Ocean Gliders

R.V. Newhook (President and CEO)

CCMC

P. Tobin

Assistant Deputy Minister, Dept of Mines and Energy

Government of Newfoundland and Labrador

**STAFF****President & CEO**Newhook, R.V., B.Eng. *Memorial*, P.Eng.**Vice President**Gillespie, R.T., M.Sc. *Memorial*, P.Geo.**Director, Info Marine**Carter, W., B.Sc. *Memorial***Director, Sea Comm**Cater, N.E., B.Eng. *Memorial*, P.Eng.**Director, Industry Development**Burry, C., BA *Memorial***Manager, Corporate Affairs**Kearsey, M., B.A. *Memorial***Network Administrator**

Davis, E.

**Event Coordinator**Dutton, A., B.Comm.(Co-op) *Memorial***Programmer/Analyst**

Bruce, S.

**8.5 C-Core****Board of Directors**

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President, Murphy Oil Company Ltd.

Mr. S.C. Schock (Vice-Chair)

Senior Vice-President, Engineering &amp; Technical Services

TransCanada PipeLines Limited

Mr. S. Allen

President, Technip Offshore Canada Limited

Mr. J. Bates

General Manager Asset Development

Chevron Canada Resources

Mr. T. Craig  
Team Lead, Deep Panuke Development  
EnCana Corporation

Mr. W. Fleming  
Vice-President, East Coast  
Petro-Canada

Dr. Ray Gosine  
Dean, Faculty of Engineering and Applied Science  
Memorial University of Newfoundland

Dr. Doug House  
Deputy Minister  
Innovation, Trade and Rural Development  
Government of Newfoundland and Labrador

Dr. C. Loomis  
Vice-President (Research)  
Memorial University of Newfoundland

Mr. M. Ruelokke  
General Manager, East Coast Operations  
AMEC Oil & Gas

Dr. L. Schramm  
President & CEO, Saskatchewan Research Council

Mr. W. Thistle, Q.C., C. Arb  
Counsel, McInnes Cooper

Ms. J.A. Whittick  
President & Chief Executive Officer, C-CORE

Mr. V. Young  
Company Director

#### Officers of the Corporation

Whittick, J.A., B.Sc. *Dunelm*, President and Chief Executive Officer  
Kennedy, S.C., B.Comm., C.M.A. *Memorial*, Chief Financial Officer  
Randell, C.J., B.Eng. *Lakehead*, M.A.Sc., Ph.D. *Victoria*, P.Eng.; Vice-President; Cross appointment with Faculty of Engineering and Applied Science

#### Management Team

Clark, J.I., B.Sc. *Acadia*, B.Eng. *Technical University of Nova Scotia*, M.Sc. *Alberta*, Ph.D. *Technical University of Nova Scotia*, P.Eng.  
Delaney, B.J., B.Sc.Eng. *Queen's*, P.Eng.  
Kenny, S., B.Eng., M.Eng., *Memorial*, Ph.D. *Daltech*, P.Eng.; Cross Appointment with Faculty of Engineering & Applied Science  
Morgan, V.R., M.A. *Cambridge*, M.Sc. *Imperial College*, P.Eng.  
Phillips, R., B.Sc. *Bristol*, M.Phil., Ph.D. *Cambridge*, P.Eng.; Cross appointment with Faculty of Engineering and Applied Science  
Power, D., B.Eng., M.Eng. *Memorial*, P.Eng.  
Ralph, F., B.Eng., M.Eng. *Memorial*, P.Eng.  
Wojcik, P.J., B.Sc., M.Sc., Ph.D. *Gdansk*

C-CORE is an applied R&D corporation in St. John's, Newfoundland and Labrador with over 50 staff. Located on the campus of Memorial University of Newfoundland, it embraces a wide spectrum of engineering and business skills required by resource industries operating in global markets. C-CORE works closely with industrial partners to develop technologies for resource industries and collaborates with industries, research institutes, universities and government agencies to build highly skilled teams that respond to global technology challenges. Since 1975, its activities have grown to include applied R&D, technology transfer and technology demonstration, commercialization of intellectual property, and specialized advisory services to a wide range of industries.

The collaborative work environment at C-CORE allows the organization to apply the fullest available range of expertise to client needs. Undertaking major programs in ice engineering, remote sensing, geotechnical engineering and intelligent systems, C-CORE applies this expertise across a number of resource sectors including oil and gas, mining, pipelines, forestry, and pulp and paper.

C-CORE's in-house facilities include an Acutronic 680-2 Centrifuge Machine, a full-scale buried pipeline modelling facility, mechanical, electrical, and soils laboratories to support its research activities, and excellent computing capabilities including the connection to a high speed network. C-CORE's clients are national and international companies, and government agencies from many market sectors, the largest being pipeline, oil and gas, and mining. Working in partnership with other R&D corporations, small and medium sized enterprises (SMEs), and academia to deliver services and technologies maximizes both the R&D effort and the financial resources for projects.

C-CORE's Board of Directors, a majority whom are from industry, keep C-CORE linked to the needs of its industrial clients. When required to do so, C-CORE diversifies into new technology areas to support the activities of its stakeholders. Further, the cultivation of human resources, in close collaboration with the University, is a key element of the organization's strategic vision. C-CORE offers many opportunities for graduate and undergraduate students to work on industry relevant projects and for its employees to pursue higher education. C-CORE remains dedicated to the economic development of Canada, in particular the Province of Newfoundland and Labrador.

## 8.6 Centre for Collaborative Health Professional Education

Vernon Curran, Ph.D.  
Co-Director (Programming & Research)

Dennis B. Sharpe, Ph.D.  
Co-Director (Planning & Development)

The Centre was established in September 1999 by the Directors of the Schools of Nursing, Pharmacy, Social Work and the Deans of the Faculties of Education and Medicine. The Deans and Directors comprise the Centre's Governing Council and are responsible for appointing the Directors and Scholars. The Scholars are faculty members who have demonstrated scholarly expertise and achievement in education, and who have substantial involvement in the work of the Centre. Other faculty members may identify themselves as Members of the Centre, and are welcome to participate in the Centre's activities.

The mission of the Centre is to improve the education of social workers, pharmacists, nurses, physicians and other health professionals through the following objectives:

1. developing, facilitating and coordinating collaborative, interprofessional educational programs;
2. providing expertise and material resources for enhancing the design, delivery, and evaluation of educational programs;
3. stimulating and supporting collaborative research in health professional education;
4. promoting health professional education as an academic pursuit;
5. collaborating with faculty developers to provide education-related training;
6. developing and providing simulated patient/client programs for training and assessment.

Further information may be obtained by contacting the Centre in writing to the Centre for Collaborative Health Professional Education, Memorial University of Newfoundland, Health Sciences Centre H2901, St. John's, NL Canada, A1B 3V6, or by telephone to (709) 777-6912, or by fax to (709) 777-6576, or through the website at [www.med.mun.ca/cchpe](http://www.med.mun.ca/cchpe).

## 8.7 Centre for Earth Resources Research (CERR)

For a complete listing see Research Units in the Faculty of Science section of the University Calendar.

## 8.8 Centre for International Business Studies (CIBS)

Director: S. Vaughan  
 International Program Officer: vacant  
 International Internship Officer: W. Jackson

The Centre for International Business Studies was established in 1994 by the Faculty of Business Administration to help provincial businesses enter the international marketplace. The Centre also facilitates international exchanges for students and faculty and provides them with the opportunity to research issues in international business and trade.

The Centre works with local businesses to enhance their effectiveness within the international business community by matching skills and programs within the Faculty of Business Administration with a company's needs.

The Centre develops international student and faculty exchanges which allow participants to gain experience in foreign business practices and develop international contacts. The faculty's list of international exchange sites currently includes universities in Belgium, the Czech Republic, Denmark, England, France, Germany, Ireland, Mexico, the Netherlands, Norway, Scotland, and Sweden.

The Centre also facilitates internships for recent graduates. International in scope, the internships allow recent graduates to gain experience with companies located worldwide, or with provincial companies that wish to expand their business on an international level. Further information may be obtained by contacting the Centre by telephone to (709) 737-2086 or through the website at [www.mun.ca/cibs](http://www.mun.ca/cibs).

## 8.9 Centre for Management Development (CMD)

The Centre for Management Development collaborates with the P.J. Gardiner Institute for Enterprise and Entrepreneurship (PJE) as *Envision Alliance*, a partnership which allows for greater efficiency in operations and an enhanced ability to deliver management and entrepreneurial initiatives in the local, national and international arena.

Morrissey, B., Director, CMD  
 Simmons, B., Interim Director, PJE  
 Costello, S., Associate Director, The Enterprise and Entrepreneurship Gateway  
 Mosher, D., Associate Director, Family Business  
 Gardiner, S., Associate Director, Financial Leadership  
 Power, R., Business Consultant  
 Butler, S., Business Consultant  
 Mahaney, G., Program Coordinator  
 Arscott, S., Program Developer  
 Collins, J., Client Relationship Coordinator  
 Miller, C., Office Administrator  
 Nixon, P., Administrative Staff Specialist  
 Keefe, M., Accounting and Administrative Clerk  
 Robinson, J., Client Service Specialist

The CMD was established within the Faculty of Business Administration at Memorial University of Newfoundland in 1980. Its mission is to facilitate excellence in managerial development by working with organizations to determine their specific needs, and to arrange for the delivery of products or programs which best meet these needs.

The CMD acts as an intermediary between the client and the available sources of managerial development expertise. The focus of our efforts, and our principal responsibility, is the monitoring and maintenance of quality throughout the managerial development process from design through delivery and follow-up. We do not maintain our own permanent program delivery staff.

The CMD works with a variety of organizational clients from both the private and public sectors, including professional and industry associations, and not-for profit agencies and groups. In addition, it continues to offer a range of professional development programs throughout the year.

Each year the CMD runs an Executive Development Program (EDP), presenting participants with leading edge management techniques that focus on organizational success, effective performance, quality and competitiveness. Faculty for the EDP regularly include facilitators from across North America and Europe.

The CMD's state-of-the-art facilities are located on the fourth floor of the Faculty of Business Administration building at the University and include various styles of classrooms, work areas, dining facilities, and a participant lounge. Further information may be obtained by contacting the Centre by telephone at (709) 737-7977, or by fax to (709) 737-7999, or through the website at [www.mun.ca/cmd](http://www.mun.ca/cmd), or by e-mail to [billm@mun.ca](mailto:billm@mun.ca), [jcollins@mun.ca](mailto:jcollins@mun.ca), [sarscott@mun.ca](mailto:sarscott@mun.ca), [mcurran@mun.ca](mailto:mcurran@mun.ca), or [susang@mun.ca](mailto:susang@mun.ca).

## 8.10 Centre for Material Culture Studies

**Advisory Committee**  
 Dean of Arts, Chair  
 Hiller, Dr. J.K., History  
 Lovelace, Dr. M., Folklore  
 Mannion, Dr. M., Geography  
 Tuck, Dr. J. A., Anthropology

**Director**

Pocius, Dr. G.L., Folklore

The Centre for Material Culture Studies was established in 1988 to initiate, promote, and sponsor research on material culture within both the University and the general community. The Centre acts as a multidisciplinary forum for Memorial University of Newfoundland faculty members as well as visiting researchers from other institutions, including government agencies. The Centre houses a research library and a wide range of visual and documentary resources relating to material culture.

**8.11 Fisheries Conservation Chair**

The Fisheries Conservation Chair is a research group created at Memorial University of Newfoundland in 1996 to develop an independent fisheries research program to complement and scrutinize Government programs and provide an integrative focus for fisheries research at the University. The Chair is funded by the Natural Sciences and Engineering Research Council of Canada, the Provincial Department of Fisheries and Aquaculture, the Department of Fisheries and Oceans, and Fishery Products International.

The Fisheries Conservation research program focuses on several aspects of fisheries science and management, including:

1. The collapse and rebuilding of groundfish stocks in Atlantic Canada.
2. Sea-going research.
3. Using high-technology to measure the ocean and its fishes (acoustics, electronic sensors, tagging).
4. A comparative ecosystem approach to fisheries management and conservation.
5. Working with the fishing industry.

In addition, the Fisheries Conservation Chair provides a wide range of opportunities and training for students at the graduate level in fisheries science. An important element of this training is experience at sea with scientific research, research vessels, and fisheries. Students use and develop the latest technology to measure ocean ecosystems and fish populations.

**Senior Chair**

Rose, G.A., B.Sc. *Guelph*, M.Sc. *Laurentian*, Ph.D. *McGill*; Cross appointments with Department of Biology and Ocean Sciences Centre

**8.12 Folklore and Language Archive****Chairman, Advisory Committee**

Dean of Arts

**Director**

Lovelace, Dr. M.

**Archivist**

Fulton, P.

**Honorary Research Associate (Folklore)**

Halpert, V. M.

**Honorary Research Associate (Language and Folklore)**

Widdowson, J.D.A.

The Memorial University of Newfoundland Folklore and Language Archive was a joint creation of the Departments of Folklore and English. It was set up to coordinate diverse research in Newfoundland and Labrador studies undertaken in both Departments, to facilitate the mutual use of common material, to organize it for research and publication, and to make a permanent documented record for future generations. The Folklore and Language Archive is an integral part of the teaching and research activities of the Department of Folklore on both the graduate and undergraduate levels.

The Archive comprises extensive collections of Newfoundland and Labrador folksongs and music, folk narratives of many kinds, oral history, folk customs, beliefs and practices, childlore, and descriptions of material culture. It has special collections of the Newfoundland and Labrador vocabulary, proverbs and riddles, and collections towards a linguistic atlas. The materials have been collected by a variety of means: by questionnaires, by student contributions in manuscript, by extensive field work utilizing tape recorders, and by searching printed sources.

The Archive is housed in the G.A. Hickman Building. Associated with it is a recording room, with facilities for copying tapes and records, and for the making of recordings. The specially excerpted collection in language is housed in the English Language Research Centre of the Department of English. French language and folklore materials from the province are housed in the Centre d'Etudes Franco-Terreneuviennes in the Department of Folklore. Each Department has a working library associated with the archival material.

**8.13 Genesis Group Inc.**

King, D.J., President and CEO

GENESIS Group Inc. is a separately incorporated entity of Memorial University of Newfoundland and is governed by a board of directors representing industry, academia, and government. It is here to serve the whole university community and to facilitate the linkage to the business community. Genesis Research, as its primary goal, identifies and commercializes promising technologies arising from research at the University. Areas of expertise include Biotechnology and Medicine, Physical Sciences and Engineering and Information Technology and Communications. Key industrial sectors include the mining and oil and gas industries. In addition to its central role of transferring technology to the private sector, the research group assists the province's small and medium-size businesses to access the vast physical and human resources of the University. Genesis Research focuses on new technologies, processes, and services and seeks to enhance, improve, and/or diversify an existing industry's capability. The Genesis Centre is a support network to help knowledge-based businesses/entrepreneurs create high-growth enterprises. The Centre mobilizes the province's business community and a network of world class mentors to help the entrepreneurs develop comprehensive business plans, raise equity capital and secure global market access. Genesis Bio-labs is a wet lab facility to support start-ups in the biotechnology sector. Genesis Innovation Works, located in the Inco Innovation Centre, is a prototype development centre and an on-campus collaborative research facility for university/industry partnership initiatives.

Further information may be obtained by contacting the Genesis Group Inc. by telephone at (709) 737-4527, or through the website at [www.genesis.mun.ca](http://www.genesis.mun.ca).

**8.14 Health Research Unit****Members**

Gadag, V., Ph.D., Director, Biostatistics

Audas, R., Ph.D., Health Statistics and Economics  
 Bavington, W., M.D., M.P.H., FRCP(C), Community Health  
 Beausoleil, N., Ph.D., Women's Health  
 Gustafson, D., Ph.D., Social Science and Health  
 Mathews, M., Ph.D., Health Services  
 Neville, D., Sc.D., Health Policy  
 Wang, P., Ph.D., Epidemiology  
 West, R., Ph.D., Epidemiology

#### Associate Members

Allison, D., M.D., Community Health  
 Buehler, S., Ph.D., Epidemiology

#### Research Support

Longerich, L.L., M.S., Medical Researcher and Manager  
 Ryan, E.A., M.Sc., Senior Researcher

The Health Research Unit was established in 1991 as a unit of the Faculty of Medicine within the Division of Community Health. It makes available the professional skills, expertise and information resources of the Division to other faculty, government departments, non-government agencies and organizations, and the community.

The purpose of the Health Research Unit is to improve the health of the Newfoundland and Labrador community-at-large through research focussed on the prevention of disease and the protection and promotion of health.

#### Research Themes

1. Measurement of health status in community/workforce populations;
2. Assessment of the health care system;
3. Development and management of health information systems;
4. Design and analysis of health surveys and audits; and
5. Evaluation of health and social programs

The Health Research Unit may be contact by telephone at (709) 777-6905 or by web at [www.med.mun.ca/hru](http://www.med.mun.ca/hru).

## 8.15 Institute for Folklore Studies in Britain and Canada

#### Directors

Smith, Dr. P., Department of Folklore, Memorial University of Newfoundland, St. John's, Newfoundland and Labrador, Canada A1B 3X8  
 Beal, Dr. J., National Centre for English Cultural Tradition, University of Sheffield, Sheffield, England S10 2TN

#### Aims

1. To foster and extend cooperation and scholarly endeavour between the Department of Folklore at Memorial University of Newfoundland and the National Centre for English Cultural Tradition at the University of Sheffield;
2. To promote the study of folklore in Britain and Canada through teaching, research, archive development and publication;
3. To encourage and engage in research on all aspects of folklore which link the two host nations in a common tradition.

#### Structure

1. Two Joint Directors, to consult and to effect practical cooperation; one appointed by each institution, on the recommendation of the Dean of the appropriate Faculty. Each Joint Director will normally be the Head of the Department of Folklore of Memorial University of Newfoundland and the Director of the National Centre for English Cultural Tradition at the University of Sheffield.
2. A Steering Committee, consisting initially of two members from each institution, with power to co-opt, if necessary, a non-voting chairman to be chosen from among the members.
3. Function of the Steering Committee: The Steering Committee will assist the Directors in matters of policy concerning the Institute.

## 8.16 Institute of Social and Economic Research (ISER)

#### Executive Committee

Simms, Dr. É., Acting Director and Chair  
 Carbonella, Dr. A., Department of Anthropology  
 Hiller, Dr. J., Department of History  
 Sharpe, Dr. C., Department of Geography  
 Stanbridge, Dr. K., Department of Sociology  
 Tye, Dr. D., Department of Folklore

#### Ex Officio

Potter, A., Manager, ISER Books  
 Feehan, Dr. J., Chair, J.R. Smallwood Foundation for Newfoundland and Labrador Studies

#### Virtute Officii

Wolinetz, Dr. S., Acting Dean of Arts

#### ISER Master Fellowships

Barnable, K.S., B.A. *Memorial*  
 Jurakic, I., B.A.(Hons.) *McMaster*  
 Reschny, J., B.A. *Northern British Columbia*

#### ISER Post-Doctoral Fellowship

Hunter, M., (Renewal), B.A.(Hons.), M.A. *Memorial*, Ph.D. *Hull, UK*

#### ISER Books Post-Doctoral Fellowship

Kearney Guigné, A., B.A., M.A., Ph.D. *Memorial*

#### Administrative Staff

Harding, M., Administrative Staff Specialist  
 Collins, R., Secretary

#### Purpose And Mandate

The purpose of the Institute shall be to undertake, sponsor, and publish research within such disciplines and in such parts of the world

as are deemed of relevance to Newfoundland and Labrador. Without limiting the generality of the above, research pertaining directly to social and economic development in Newfoundland and Labrador shall be of special importance.

#### **Organization**

The Institute is an integral part of, and not an autonomous appendage, of the University. It is so organized that all its officers serve the University in other capacities and it is ultimately responsible to the President and Board of Regents of the University. The management of its affairs is vested in an Executive Committee, while the day-to-day responsibilities are in the hands of the Director and the Manager assumes daily responsibility for ISER Books.

#### **Fellowships**

In general, ISER fellowships function to supplement and stimulate research interests of faculty and graduate students in the social science departments. Terms and conditions of ISER fellowships may be obtained in writing to ISER, Institute of Social and Economic Research, Memorial University of Newfoundland, St. John's, Newfoundland and Labrador, A1C 5S7, or by telephone to (709) 737-8156, or by email to iser@mun.ca, or through the website at [www.mun.ca/iser/](http://www.mun.ca/iser/).

#### **ISER Books**

Mr. A. Potter, Manager

The Institute publishes research in the social sciences - more than 90 titles to date. Many of the books originate in research undertaken by ISER itself. Some notable ISER books, however, have originated outside the Institute. Authors are invited to submit completed manuscripts within such disciplines and about such parts of the world as are deemed of relevance to Newfoundland and Labrador - whether the focus is contemporary or historical, natural resource management, or the management of social and cultural resources. Further information may be obtained in writing to ISER Books, Memorial University of Newfoundland, St. John's, Newfoundland and Labrador, A1C 5S7, or by telephone to (709) 737-7474, or my email to iser-books@mun.ca, or through the website at [www.mun.ca/iser/](http://www.mun.ca/iser/).

### **8.17 International Centre**

Dickinson, Dr. A.B., Acting Executive Director/International Liaison Officer  
Clarke, C., International Projects Administrator/Office Manager

#### **Purpose And Mandate**

The International Centre is in general concerned with:

1. coordinating and promoting the University's global endeavor, including international exchanges and development projects;
2. promoting internationalization of the University's teaching and research mandate by providing a formal institutional link with the University's faculties and academic units;
3. developing and managing international projects and investigating funding sources, with particular reference to development assistance;
4. providing program information and advice to faculty and staff and act as the central contact with the Canadian International Development Agency and other similar bodies;
5. pursuing new opportunities to develop partnerships with the private sector and other educational institutions to keep the centre self-sufficient in the future.

### **8.18 The J.R. Smallwood Foundation for Newfoundland and Labrador Studies**

#### **Board**

Jerkic, Dr. S., Department of Anthropology  
Auringer Wood, Ms. A., QEII Library  
Dunn, Dr. C., Department of Political Science  
Hiscock, Dr. P., Department of Folklore  
Byrne, Dr. P., Department of English Language and Literature  
Rollmann, Dr. H., Department of Religious Studies  
Ryan, Dr. S., Department of History  
Sharpe, Dr. C., Department of Geography

#### **Ex Officio**

Feehan, Dr. J., Director; Department of Economics

#### **Virtute Officii**

Vice-President (Research)  
Dean of Arts  
Director, Institute of Social and Economic Research

#### **Purpose And Mandate**

The Smallwood Foundation was established with funds transferred in trust from the J.R. Smallwood Heritage Foundation. The Foundation administers the income from such funds for the promotion and support of research focusing on Newfoundland and Labrador. The board supports research proposals in the humanities and social sciences from both inside and outside the university community.

#### **Organization**

The Foundation is governed by a board appointed by the Board of Regents. Members normally belong to the Faculty of Arts at the University and represent disciplines active in Newfoundland and Labrador Studies. In accordance with its mandate, the board awards grants to individual scholars and organizations which have clearly defined objectives and which serve to develop the academic understanding and general appreciation of the province's society, history and culture. Full details of grant categories and application procedures are available on the Foundation's web site at [www.mun.ca/smallwood/](http://www.mun.ca/smallwood/).

Further information may be obtained in writing to The Director, J.R. Smallwood Foundation for Newfoundland and Labrador Studies, Memorial University of Newfoundland, St. John's, NL, A1B 3X9.

### **8.19 Labrador Institute**

Vacant, Director  
Sparkes, Dr. R., Labrador Associate  
Dickers, B., Administrative Staff Specialist  
MacDonald, M., Program Researcher  
Nuotio, L., Manager, Labrador West



### **Purpose And Mandate**

The Labrador Institute of Memorial University of Newfoundland was established by the University to stimulate, coordinate, and support major University projects and programs designed to promote the well-being of the people of Labrador and to expand the Labrador knowledge base. Its location in Happy Valley-Goose Bay, the administrative centre of Labrador, gives it a perspective on regional and aboriginal conditions and issues that direct the operations of the Institute.

The Institute identifies opportunities in research where the capabilities of the University may enhance our knowledge of Labrador and address concerns of the community, and puts forward educational needs for continuing human resource and cultural development.

The Institute is the main contact point for the University in Labrador. The Institute maintains communications with aboriginal and community groups and the Faculties and Schools of the University to ensure that there is a timely response to research and educational opportunities. It also sponsors many cultural activities including the Labrador Creative Arts Festival.

The Institute facilitates and coordinates the activity of personnel at the University as they undertake cultural, research, and educational activities. The Institute partners with Faculties and Schools to solicit funds for research and the delivery of educational programs and with other social, cultural and educational institutions in Labrador.

The Institute is not a regulatory body but it is available to advise on the normal process of grant applications by individuals. The Institute recommends that notice or copies of such applications be filed with the Institute to obviate duplication of effort within the University. It also maintains and administers an invaluable archival collection of Labrador materials. It is the Institute's intent to collect and disseminate all pertinent copies of research conducted by or through the University.

### **Organization**

The Director of the Institute reports to the Vice-President (Academic).

The Research Advisory Committee, comprised of faculty members who are engaged in research in Labrador, maintain communications between the Institute and the Faculties and Schools. It advises on research and educational projects and priorities.

The Advisory Board, comprising Labrador residents, has both geographic and aboriginal representation appointed by the Vice-President on the recommendation of the Director of the Labrador Institute. The Board provides direct input from the community into the operations of the Institute.

The Labrador Institute maintains a centre in Happy Valley-Goose Bay and an office in Labrador West. An Archive provides a reference collection of publications on Labrador and other northern regions for public use, and arranges inter-library loans through the main University library. The Labrador Institute also is the ACURA site for archaeological work in Labrador.

### **Northern Science Training Grants**

The Labrador Institute along with the Office of Research acts as the agent within the University which receives and disburses Northern Scientific Training Program grants received from the Department of Indian Affairs and Northern Development. The Institute also serves as the University's representative on the Association of Canadian Universities of Northern Studies.

Further information may be obtained by contacting the Institute in writing to the Labrador Institute, P.O. Box 490, Station B, Happy Valley-Goose Bay, NL, A0P 1E0, or by telephone to (709) 896-6210, or by fax to (709) 896-2970.

## **8.20 Maritime History Archive**

### **Chair, Board of Directors**

Handcock, Dr. W.G. [Retired]

### **Board Members**

Fischer, Prof. L., Department of History

Hart, A. [Retired]

Staveley, Dr. M., Department of Geography [Retired]

Burton, Dr. V., Department of History

Wareham, H., Archivist

In 1986 the Maritime History Archive was established as a separate unit within the Faculty of Arts as a result of reorganization of the Maritime History Group. Its functions include the acquisition, organization, and preservation of materials relating to the history of sea-based activities and societies, with a special emphasis on the North Atlantic Basin.

Since the mid-1970's the Public Record Office, London, England has transferred 22,000 ft. of original documentation in the series "Agreements on Account of Crew" for the period of 1863-1938, 1951-1976 to the Maritime History Archive. These documents represent an incomparable source for the study of the movements and manning of British Empire vessels throughout the world. Combined with collections relating to fisheries, commerce, and other sea-based activities, the crew agreements have made the Maritime History Archive an internationally known resource centre for the study of maritime history.

The Archive is housed in the Mathematics Building and is open to the public Monday through Friday, 9 a.m. to 1 p.m. and 2 p.m. to 4:00 p.m. and Thursday evening from 7 p.m. to 9:30 p.m. during University Fall and Winter Semesters. A research service (for a fee) to undertake small research projects and answer queries pertaining to its subject area is also available.

## **8.21 The Maritime Studies Research Unit (MSRU)**

### **Chair**

Pope, P.E., Anthropology and History

### **Members**

Baker, M., Records Management

Burton, V., History

Cadigan, S., History

Dickinson, A.B., International Program

Fischer, L., History

Hiller, J., History

Janzen, O., History; Sir Wilfred Grenfell College

Sanger, C., Geography

Walsh, V., Maritime History Archive

Wareham, H., Maritime History Archive

The MSRU is a research unit within the Faculty of Arts, whose purpose is to foster interdisciplinary research on maritime studies, understood as the interpretation of human behaviour in marine and coastal environments, in the past and to the present day. The Unit furthers this objective with workshops, colloquia, publications, and research projects and by providing advice and support to other units within the University. Membership in the MSRU is open to faculty and staff of Memorial University of Newfoundland with research

interests in maritime studies. Other scholars with parallel interests, including graduate students in the University's Faculty of Arts, are eligible for associate membership. Currently, the MSRU has associate members in Canada, England, Nigeria, Scotland and the United States.

## 8.22 Memorial University of Newfoundland Botanical Garden

### Staff

Nicholls, K.W., Director  
 Bishop, M.A., Research Liaison  
 Madden, A.M., Interpretation Coordinator  
 White, C.P., Head Gardener  
 Owens, P.J., Jr., Grounds Maintenance Foreman  
 Cooper, J., Gift Shop Manager  
 Walsh, T.G., Nursery Manager  
 Kasimos, C., Research Assistant  
 Carter-Barfoot, J., Environmental Education Assistant  
 Crotty, M., Public Relations and Membership Officer  
 Stares, R., Assistant Gardener  
 Williams, L.J., Grounds Maintenance Worker  
 Owens, P.R., Grounds Maintenance Worker

Memorial University of Newfoundland Botanical Garden, Mount Scio Road, comprises ten acres of cultivated gardens and 100 acres of natural habitat that includes the 14-acre Oxen Pond. The main objectives are to undertake and provide opportunities for biological, ecological, and horticultural education and research for the University, the general public, school children and other organized groups while stimulating public interest and enjoyment of the Newfoundland and Labrador flora, fauna and environment.

An interpretative program is designed to provide information on native plants, animals, and horticulture to school groups and the general public. A series of interpretive booklets is produced on topics related to horticulture, plants, smaller animals and ecology. A field centre houses indoor displays, a library, a tea room, and a lecture room. Numerous interpreted nature trails are maintained through a variety of natural habitats. Cultivated areas include the rock garden, peat beds, woodland beds, cottage garden, heritage garden, wildlife garden, shade garden, vegetable garden, and herbaceous border.

The Memorial University of Newfoundland Botanical Garden is available for university classes and research year-round. It is open to the public daily from May through November.

## 8.23 Memorial University Recreation Complex Incorporated

### Board of Directors

Thistle, B., Chairperson  
 Donovan, M., Vice Chair

Other members of the volunteer Board include representatives from the student body, the University, and the community at large.

### Staff

Richardson, A., Director  
 O'Connor, J., Manager of Aquatic's/Recreation  
 Neil, C., Manager of Fitness  
 Kenny, E., Manager of Maintenance - Aquarena  
 Coffey, K., Manager of Maintenance - Field House  
 Ducey, B., Manager of Finance

### The Works

The Works is a separately incorporated entity with a volunteer Board of Directors.

The Works is a division of Memorial University Recreation Complex Inc. It manages the Field House, Aquarena, and recreation facilities on the St. John's campus. These world class facilities offer a variety of fitness, aquatic, recreation, and sport programs for all ages and for all members of the University and the community at large.

There are approximately 250 employees at The Works and the majority of these employees are students from Memorial University of Newfoundland.

Further information may be obtained by contacting The Works by telephone at the Field House (709) 737-3000, or the Aquarena at (709) 737-3799, or through the website at [www.theworksonline.ca](http://www.theworksonline.ca).

## 8.24 Newfoundland and Labrador Centre for Applied Health Research (NLCAHR)

Director: Dr. Stephen Bornstein

The Newfoundland and Labrador Centre for Applied Health Research was established in September 1999 with core funding from the provinces Department of Health and Community Services, Memorial University of Newfoundland and the Health Care Corporation of St. John's. NLCAHR's mission is to contribute to the effectiveness of the health and community service system of Newfoundland and Labrador and to the physical, social, psychological health and wellbeing of the provinces population by supporting the development and the use of applied health research in this province.

The Centres mandate is to increase the capacity of researchers in Newfoundland and Labrador to carry out high-quality research on health matters with a relevance to public policy and clinical decision-making; to increase the amount of high-quality applied health research undertaken on issues identified by the Centres major partners and stakeholders as having high priority to the provinces health system and to the health and wellbeing of its population; and to foster more effective use of research evidence in the provinces health and community services system.

The Centre fosters and supports inter-disciplinary collaboration and serves as a bridge between researchers and decision-makers in government, the provincial health-care system, and community organizations. The Centre funds health research through annual peer-reviewed research grant competitions; funds research training by awarding fellowships at the masters, doctoral, and postdoctoral levels; and runs a number of other programs to encourage and support applied health researchers in Newfoundland and Labrador.

The research supported by the Centre is broad in scope and includes research in the areas of health services delivery and evaluation, health economics and policy, healthcare utilization and systems, community and population health, health-related social sciences, and applied clinical research focusing on the process of delivering care rather than therapeutics or diagnostics

Further information may be obtained by contacting the Centre in writing to the Newfoundland and Labrador Centre for Applied Health Research, Suite 300, 95 Bonaventure Avenue, St. John's, NL, A1B 2X5, or by telephone to (709) 777-6993, or by fax to (709) 777-6734,

or by e-mail to [nlcahr@mun.ca](mailto:nlcahr@mun.ca), or through the website at [www.nlcahr.mun.ca](http://www.nlcahr.mun.ca).

## 8.25 Newfoundland Quarterly

L. Whalen, Editor

### Newfoundland Quarterly Foundation Board

O'Brien, P., Chair  
 Bartlett, L.  
 Blackwood, D.  
 Bradley, D.  
 Colborne, B.  
 Fraser, J.  
 Maloney, A.  
 Meisen, A.  
 Morgan, B.  
 O'Neill, F.  
 Sparkes, R.  
 Whalen, L.

### Editorial Advisory Committee

Peters, H.  
 Riggs, B.  
 Ritcey, J.  
 White, L.

### Aspects Editor

Webb, J.

The *Newfoundland Quarterly* is a 102 year-old journal focused on the arts, culture, history, industry and people of Newfoundland and Labrador published by the *Newfoundland Quarterly* Foundation Board, a not-for-profit charitable foundation. Owned by Memorial University of Newfoundland, the *Newfoundland Quarterly* features contributions from the province's top writers and visual artists as well as writings by our most prominent people. Many contributors have a presence on the national and international stage.

## 8.26 Ocean Engineering Research Centre (OERC)

### Administration

Veitch, B.J., B.Eng., M.Eng. *Memorial*, L.Tech., Dr.Tech. *Helsinki*; Terra Nova Research Chair in Ocean Environmental Risk Engineering; Associate Professor; Director  
 Caines, S., Secretary

### Engineering Technologist

Gosse, J.

### Scope And Objectives

The Ocean Engineering Research Centre (OERC) is an integral part of the Faculty of Engineering and Applied Science and has contributed to the success of the research and academic programs within the Ocean and Naval Architectural Engineering group at Memorial University of Newfoundland. The overall goal of the OERC is to generate research activity that has high potential for impact. The OERC draws upon faculty expertise and its relationships with industry, other research institutes, and branches of government to create networks of people who share common goals. The scope of applied research and consulting activities carried out by members of the OERC is broad, including ocean engineering related to the offshore, marine transportation, and fishing industries. In addition to faculty experience, the OERC operates a 58 meter long towing tank with wave generation capabilities.

### Organization

The St. John's marine research community is vibrant and collaborative. Within the University the Centre maintains ties with C-CORE (by joint appointments of faculty and collaborative projects), with the Ocean Science Centre and the Fisheries and Marine Institute. Similar ties are maintained with the Institute for Ocean Technology (IOT) of the National Research Council, which is located adjacent to the Faculty of Engineering and Applied Science on the University campus. The Centre collaborates with and serves various small and large private sector firms with ocean engineering interests. The Centre works with Oceanic Consulting Corporation to provide marine performance evaluation services to the world's oceans industries. An alliance between the University, NRC and Marineering Limited of St. John's, Oceanic uses the ocean engineering capabilities and facilities of the University and NRC to support clients and projects around the world.

## 8.27 Ocean Sciences Centre

For a complete listing, see Research Units in the Faculty of Science section of the University Calendar.

## 8.28 One Ocean

Located at the Fisheries and Marine Institute, One Ocean is the liaison organization established by the fishing and petroleum industries of Newfoundland and Labrador. One Ocean provides a neutral forum for both sectors to facilitate communication, information exchange and shared opportunities. Our mandate is to assist the fishing and petroleum industries in understanding each other's operations and activities. One Ocean will endeavor to identify and/or address industry-specific issues for each sector as well as issues common to both. The organization will commission research studies and conduct literature reviews to maintain diligent responses to industry inquiries. The structure of the One Ocean Industry Board is conducive to equal representation of both the fishing and petroleum industries; consisting of knowledgeable and active stakeholders from each sector. This structure enhances the opportunity for information dissemination and progressive joint initiatives for two industries operating in one ocean. You can contact One Ocean by fax to (709) 778-0413 or by telephone at (709) 778-0511.

### Staff

#### Executive Director

Slade, G.

#### Research Analyst

Murphy, M., B.A.C.S. *UCCB*, M.M.M. *Dalhousie*

## 8.29 P.J. Gardiner Institute for Enterprise and Entrepreneurship (PJG)

The P.J. Gardiner Institute for Enterprise and Entrepreneurship collaborates with the Centre for Management Development (CMD) as *Envision Alliance*, a partnership which allows for greater efficiency in operations and an enhanced ability to deliver management and entrepreneurial initiatives in the local, national and international arena.

Simmons, B., Director, PJG  
 Morrissey, B., Director, CMD  
 Costello, S., Associate Director, The Enterprise and Entrepreneurship Gateway  
 Mosher, D., Associate Director, Family Business  
 Gardiner, S., Associate Director, Financial Leadership  
 Power, R., Business Consultant  
 Butler, S., Business Consultant  
 Mahaney, G., Program Coordinator  
 Arscott, S., Program Developer  
 Collins, J., Client Relationship Coordinator  
 King, L., Research Assistant  
 Miller, C., Office Administrator  
 Keefe, M., Accounting and Administrative Clerk  
 Robinson, J., Client Service Specialist

Memorial University of Newfoundland's P.J. Gardiner Institute (PJG) was the first centre of small business support to be established within a Canadian university. The objective of the Institute is to be the leading entrepreneurship institute in the province of Newfoundland and Labrador and a contributor to innovative frameworks for entrepreneurship education and support worldwide. To satisfy this objective, the PJG is comprised of four complementary centres.

**The Enterprise and Entrepreneurship Gateway** - The creation of the Gateway was a collaboration of the Youth-Focused Technological Entrepreneurship (YTE) Chair and the PJG. It is a university-based mechanism to bridge the gap between the needs of potential entrepreneurs at the seminal stages of enterprise development, and the various resources, programs and agencies that exist to meet those needs. The Gateway is catalytic in connecting the right client with the right resource at the right time. It is complementary to existing private, academic, and government agencies and programs in that its role is one of connectivity rather than duplication of service. The Gateway operates as a "re-entry model" in that a client returns to the Gateway as often as is useful for additional navigational help and support.

**The Entrepreneurship Research Centre** - Entrepreneurial research is being captured, catalogued, and stored in the Research Centre. This body of research is accessible to other researchers and the general public and disseminated by the Research Centre. The PJG is able to facilitate the participation of faculty in its research program and is a repository of entrepreneurship development 'tools' and entrepreneurship research.

**The Enterprise and Entrepreneurship Outreach Centre** - This centre develops and delivers outreach services to meet the needs of provincial and federal economic development agencies, as well as business resource agencies, in areas of particular interest or relevance. These activities create a robust interaction with provincial economic development agencies and are an essential point of intersection between the work of the PJG and the needs of real people in the real economy.

**The Business Families Centre** - This centre provides consulting, research and education in support of the special needs of family business. Historically, the needs of family business have been poorly understood and the vulnerabilities and opportunities facing family businesses have been inadequately addressed. There is a need to attend to and support issues related to training, succession planning, skill development, and financing. The centre conducts comprehensive, relevant research into questions of unique interest to the family business dynamic.

## 8.30 TETRA (Telehealth and Educational Technology Resource Agency)

Keough, E., Acting Director  
 Dwyer, P., Associate Director, Programs  
 Mooney, M., Associate Director, Operations

### Company Profile

Established in 1977, TETRA, formerly known as Telemedicine, is internationally recognized as having one of the most advanced networks in North America. TETRA has a proven track record and tradition of providing telehealth and tele-education services to a great number of clients over a large geographic region. In support of this effort TETRA, an agency of Memorial University of Newfoundland, Faculty of Medicine operates on a full-scale Telemedicine Centre from its location in the Health Sciences Centre in St. John's. TETRA is an administrative structure that successfully networks technology, support, personnel and end users. It has a proven history, of research development programs and service delivery, in the use of information and communications technologies in health and education in Newfoundland and Labrador. Over the years, TETRA has been involved in over 30 telemedicine projects, many of which have become ongoing services.

TETRA's audience has expanded in recent years and a significant consortium utilizes its resources. The users include provincial and federal departments and agencies, international organizations, not for profit groups and associations, educational institutions, private companies and local citizens.

The Centre has developed fairly autonomously within the Faculty of Medicine with historical close working ties to other divisions within the University. All human resource and financial management processes adhere to appropriate university policies however TETRA does not receive direct funding from Memorial University of Newfoundland. TETRA generates 100% of its revenue required to cover salaries, operating expenses and network costs, based on fees recovered from its user consortium.

Over the past decade TETRA's activities have diversified into a full range of research, development and service provision. Therefore, it sought out a name to reflect this change. Utilizing all aspects of information and communications technology, TETRA has developed expertise and experience in conference calling, videoconferencing, web-based technologies as well as the management of terrestrial and satellite networks.

As a provincial communications resource, TETRA is a model in Canada as a result of the degree of co-operation and support from the many agencies, organizations, individuals and TETRA employees that make it a reality.

Further information may be obtained by contacting TETRA by telephone to (709) 737-6654, or the Scheduling Coordinator to (709) 758-8313, or 1 (800) 563-0913, or by fax to (709) 737-7054, or by e-mail at tcs@mun.ca.

Archived Previous Calendar  
Current University Calendar available at  
[mun.ca/university-calendar](http://mun.ca/university-calendar)

# UNIVERSITY REGULATIONS

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# 1 Fees and Charges

The fees and charges indicated herein are as of the date of printing. The University reserves the right to make changes to the regulations, fees and charges listed below. Any questions concerning fees and charges should be directed to the Cashier's Office in St. John's or the Bursar's Office in Corner Brook.

## 1.1 Information Governing Payment of Fees and Charges

### 1.1.1 General Regulations

1. Tuition fees, residence fees, student union fees and health/dental insurance are due once a student registers regardless of the method of registration, and must be paid by the fee deadline to avoid a late payment penalty.
2. Students who are using a scholarship, bursary, Canada Student Loan, or other award for the payment of fees may be permitted to have their tuition fees outstanding until they have received the award or Canada Student Loan.

### 1.1.2 Methods of Payment

1. Cash/Debit card: must be paid in person at the Cashier's Office in St. John's or the Bursar's Office in Corner Brook.
2. Cheque: may be mailed, or delivered in person, to the Cashier's Office in St. John's or Bursar's Office in Corner Brook, or placed in the night deposit slot at the Cashier's Office in St. John's. A dishonored charge will be made for each cheque tendered to the University and not honored by the bank. A student with a dishonored cheque record must pay fees by cash, certified cheque or money order.
  - Dishonored cheque charge: \$25
3. Credit card: Visa and MasterCard are the only accepted cards. Payment using this method should be done through the telephone registration system or via the web at [www.mun.ca](http://www.mun.ca).
4. Payroll deductions: graduate students receiving funding through the University payroll system may elect to pay their tuition and other charges by payroll deduction. The policy and form for payroll deductions are available at the School of Graduate Studies, the Cashier's Office, and at [www.mun.ca](http://www.mun.ca).
5. Student Aid: students paying fees from a Canada Student Loan will have the amount owing signed out automatically from their loans.
6. Telephone banking: information on the use of telephone banking systems can be obtained from local branches of banks.
7. Tuition voucher: students receiving a tuition voucher must present the tuition voucher and pay the balance of their fees to the Cashier's Office by the published deadlines to avoid being assessed a late payment fee.

### 1.1.3 Penalties for Noncompliance with Payment of Fees and Charges

1. Students who, without approval, pay their fees later than the deadlines specified in the **University Diary** will be assessed a late payment fee.
  - Late payment fee (assessed by the Director of Financial and Administrative Services): Maximum of \$75
2. Students who have not paid all fees or arranged for fee payment with the Director of Financial and Administrative Services prior to the first day of lectures, as stated in the **University Diary**, may have their registration cancelled at the discretion of the University. Such students will then be required to reregister after all fees are paid and after the first day of lectures, as stated in the **University Diary**, but no later than the end of the regular registration period.
3. Outstanding accounts, including accounts outstanding pending the receipt of a scholarship, bursary, or similar award, must be paid in full by cash, money order, or certified cheque. Students with outstanding accounts will:
  - be ineligible to register for courses for a subsequent semester;
  - not be permitted into residence;
  - not be issued an academic transcript;
  - not be awarded a degree, diploma or certificate.
4. Accounts outstanding on the last day of examinations in a semester/session will be charged interest at the prime interest rate plus two percent per annum. Such interest will apply effective the first day of lectures in that semester.

## 1.2 Application and Admission Fees

Unless otherwise noted, these application and admission fees are non-refundable.

### 1.2.1 Undergraduate Students

1. University Calendar fee: a University Calendar will be supplied free to undergraduate students newly admitted to the University.
  - University Calendar fee for others: \$5
2. General Application Processing Fee: this fee is payable with each application for admission or readmission to the University.
  - Undergraduate students who have never attended a post-secondary institution or who have previously attended Memorial, excluding medical students: \$40
  - Undergraduate students who have attended a post-secondary institution outside of Newfoundland or who are non-Canadian applicants, excluding medical students: \$80
  - Medical students: \$75
3. Fees in addition to General Application Processing Fee
  - Challenge for credit is charged at one half of the fee associated with the credit hour value of each course
4. Admission Fees in addition to General Application Processing Fee
  - Bachelor of Technology: \$300
  - Bachelor of Maritime Studies: \$300
5. Application Fee in addition to General Application Processing Fee



- School of Pharmacy: \$75
6. Penalties for Noncompliance with Payment of Application and Admission Fees
  7. Late fees: all late fees are payable when assessed.
    - Late application fee
      - Up to one week after deadline: \$30
      - Each subsequent week to final date for receipt of applications: \$10

### 1.2.2 Graduate Students

1. Application Processing Fee: payable with each application for admission to the University.
  - Application Processing Fee: \$40

## 1.3 Tuition and Related Fees

### 1.3.1 Undergraduate Students (other than Medical Students)

1. Unless otherwise specified, tuition fees are charged according to the credit hour value associated with the registered course(s). Courses are 3 credit hours unless otherwise indicated.
2. For the purposes of calculating tuition:
  - the credit hour value of each of the A and B components of a linked course shall be equivalent to one half of the credit hour value of the B component (see **Glossary of Terms Used in the Calendar**);
  - the credit hour value of F courses and non-degree courses (i.e. certificate programs) shall be three; and
  - the credit hour value of courses with "W" in the final position of the course number, excluding co-operative education work terms, shall be three.
3. Fees for citizens of Canada and permanent residents
  - Fee per credit hour: \$85
  - Co-operative education work terms: \$323
  - Technology 4100 and Technology 4200: \$1,154
  - Maritime Studies 4100 and Maritime Studies 4200: \$1,154
  - Music 141A, 141B, 241A, 241B, 346A, 346B, 446A and 446B (per course): \$454
  - Computer Science 3700 (per semester): \$154
4. Fees for international students
  - Students entering in September 2003 or later
    - Fee per credit hour: \$293.33
  - Students entering prior to September 2003
    - Fee per credit hour for the academic year 2005/2006: \$292.66
  - Co-operative education work terms
    - Students entering September 2003: \$1,020
    - Students entering prior to September 2003: \$840
  - Technology 4100 and Technology 4200: \$3,999.93
  - Maritime Studies 4100 and Maritime Studies 4200: \$3,999.93
  - Music 141A, 141B, 241A, 241B, 346A, 346B, 446A and 446B (per course): \$1,573.31
  - Computer Science 3700 (per semester): \$533.32
5. Tuition refunds based on withdrawal from course(s)
  - A student dropping courses within two weeks following the first day of lectures in any semester will not be liable for tuition fees for those courses. Students dropping courses after that time will receive tuition fee refunds on a prorated basis. Any student who drops a course from two weeks to three weeks following the first day of lectures in any semester shall have 50% of the tuition refunded. Any student who drops a course from three weeks to four weeks following the first day of lectures in any semester shall have 25% of the tuition refunded. No tuition will be refunded for courses dropped after five weeks following the first day of lectures in any semester. For the actual dates relating to these refunds, see the **University Diary**.
  - In the case of sessions, accelerated courses and courses offered outside of the normal time frame of a semester or session, the tuition refund drop periods will be prorated accordingly.
  - Tuition fees will not be refunded for any reason, including medical, for courses dropped after the final refund date.

### 1.3.2 Undergraduate Students (Medical Students)

1. Fees for citizens of Canada and permanent residents
  - Annual tuition fee (September 1 - \$3,125, January 1 - \$3,125): \$6,250
2. Fees for international students
  - Annual tuition fee: \$30,000

### 1.3.3 Graduate Students

1. Fees are payable at the time of registration. All graduate students must be registered in each semester of the three-semester academic year throughout the period of their program until all academic requirements for the degree have been met and they have been deemed eligible to graduate by the School of Graduate Studies. Final dates in each semester for notification of completion of academic requirements, in order to be deregistered from Graduate Registration 9000/Medicine 9900 without incurring liability for continuance fees, are included in the **University Diary**.
2. There is a minimum fee for all graduate degrees. The amount of this fee for both Canadian and international students will depend on

the semester fees in effect during his or her period of registration. Semester fees are subject to review at least annually. They are:

Program	Fee Per Semester for Citizens of Canada and Permanent Residents	Fee Per Semester for International Students	# of Semesters Fee Must Be Paid
Masters candidate:			
Plan A	\$733	\$953	6
Plan B	\$486	\$632	9
Plan C	\$1,010	\$1,312	3
Master of Business Administration (Executive Option)	\$7,000	\$7,000	4
Master in Oil and Gas Studies	\$10,500	\$10,500	3
Master of Science in Medicine (Applied Health Services Research)	\$2,000	\$2,000	6
Graduate Diploma Candidate	\$323	\$420	9
Doctor of Philosophy candidate (for students admitted prior to September 1, 2004)	\$911	\$1,183	9
Doctor of Philosophy candidate (for students admitted after September 1, 2004)	\$683	\$887	12

3. M.D.-Ph.D program:
  - M.D. component - standard M.D. fees for four years
  - Ph.D. component - standard Ph.D. fees plus continuance fees, if required, during the active Ph.D. component
4. At the time of first registration, each masters's candidate must select a payment plan. The fee payable in the first and subsequent semesters will depend upon the payment plan selected. Once selected, the payment plan will remain in effect for the duration of the student's period of registration, and cannot be changed. Payment Plan C is available for selected programs only.
5. A student who completes his or her program in a period of time shorter than that covered by the selected payment plan will, in his or her final semester be required to pay the difference between the product of the semester fee in effect in that final semester and the number of times which a fee should have been paid in accordance with the payment plan selected, and the actual amount paid.
6. A student whose program extends beyond the period covered by the selected payment plan will be assessed the appropriate program continuance fee for each additional semester of registration. Continuance fees will be charged until the program is complete.
7. The program continuance fees per semester for citizens of Canada and permanent residents entering September 2004 are:
  - Masters candidate: \$334
  - Graduate Diploma candidate: \$162
  - Doctor of Philosophy candidate: \$570
8. The program continuance fees per semester for citizens of Canada and permanent residents, and international students entering September 2004 are:
  - Masters candidate 8.15% of the total program fee for Plan A
  - Graduate Diploma candidate 8.15% of the total program fee
  - Doctor of Philosophy candidate 8.15% of the total program fee
9. The program continuance fees per semester for international students entering prior to September 1, 2004 are:
  - Masters candidate: \$434
  - Graduate Diploma candidate: \$210
  - Doctor of Philosophy candidate: \$741
10. The semester fees listed above cover only the courses (if any) prescribed for the program by the academic unit and approved by the Dean of Graduate Studies. A student taking courses which are not part of the approved program must pay for them separately in accordance with the fee schedule for undergraduate courses.
11. A graduate student who is permitted by the Dean of Graduate Studies to transfer from a diploma program to an allied master's program or from a master's program to a Ph.D. program before the former is completed will be required to pay the difference between the fees for the two programs, based on the semester fee in effect during each semester of the new program. This additional payment shall be made over the duration of the remaining semesters for which program fees are owed, or over three semesters, whichever is greater.
12. A graduate student who wishes to withdraw from his or her graduate program must inform the Dean of Graduate Studies, in writing, within three weeks after the first day of lectures in the semester. Failure to do so will result in the student being held responsible for the fees due to the end of that semester. Administrative fee for approved retroactive requests for leave of absence or withdrawal from program: \$25
13. Where a thesis is required by a particular degree or program, a fee will be charged to cover the cost of binding two copies of the thesis.
  - Thesis binding fee: \$20
14. Special Fees: In addition to the semester fees, the following programs charge a special fee:
  - Master of Education (Information Technology)  
charged half in semester 1 and half in semester 4: \$2,550
  - Master of Nursing (Nurse Practitioner Option)  
charged in semester 4 for students on Plan A and semester 7 for students on Plan B: \$12,813

- Post-Master of Nursing (Nurse Practitioner) Diploma charged in semester 1: \$12,813

### 1.3.4 Post-Graduate Residents and Interns

- Registration fee per annum: \$500

### 1.3.5 Lifelong Learning

1. Diploma in Information and Communication Technology Students
  - Option 1: Full-time and includes a work term (payable over three consecutive semesters): \$15,000
  - Option 2: Full-time without a work term (payable over three consecutive semesters \$5,000, \$5,000, and \$3,000): \$13,000
  - Option 2: Part-time without a work term (payable over seven consecutive semesters): \$10,000
  - Repeat Course fee: \$295 per credit hour
  - Program Continuance Fee for full-time students who do not complete the program in the normal program period: \$352

### 1.3.6 Distance Education and Learning Technologies

1. For distance education courses, there are administrative fees which are charged in addition to the tuition fees for these courses. These fees cover the cost of course materials (excluding textbooks), rental of video and audio tapes and management of web courses.
  - Administrative fees (per credit hour for Newfoundland and Labrador addresses): \$17
  - Administrative fees (per credit hour for out of province addresses): \$34
  - Change of examination location fee: \$50
  - Deferred examination fee: \$65

### 1.3.7 Penalties for Late Registration

1. A late registration fee is assessed by the Registrar and applies to students who register after the deadline specified in the **University Diary**.
  - Basic fee: \$20
  - Additional fee per day: \$10

## 1.4 Residence (Housing) and Meals Fees and Charges

### 1.4.1 St. John's Campus

For additional information on residences see the section of the Calendar dealing with Student Housing.

1. General Residence Fees: this fee will not be refunded and will not be credited to the student's account.
  - Residence application fee: \$20
2. Residence deposit: charged only to students who are applying to live in residence for the first time (due May 31 for Fall semester; November 15 for Winter semester). The deposit is creditable and may be refunded when all conditions pertaining to it are met. All students will be required to place a deposit unless exempted, in writing, by the Director of Student Housing and Food Services.
  - Residence deposit: \$200
3. Residence fees during semesters: the fees and charges below are per semester, per person, unless otherwise noted. For further information, contact Student Housing and Food Services.
  - Paton College
    - Double: \$902
    - Single: \$1,102
  - Meal Plans
    - 19 meals per week: \$1,511
    - 14 meals per week: \$1,449
    - 10 meals per week: \$1,341
  - Burton's Pond Apartments
    - Single: \$1,159
    - Family Unit (per month, per apartment): \$685
4. Residence fees between semesters: students who need to stay in residence between semesters may be accommodated providing space is available and reasonable notice is given in writing to Student Housing and Food Services. Students are required to pay the full charge on receipt of notification of acceptance.
  - Room rates (per night, per person)
    - Paton College and Burton's Pond Apartments: \$7
5. Penalties for noncompliance with payment of fees and charges
  - Students with outstanding fees will not be permitted into residence without approval from the Director of Financial and Administrative Services.
  - Students not returning to residence must cancel a room assignment by July 1 (for Fall semester) or December 1 (for Winter semester). Failure to do so will result in a cancellation charge.
    - Cancellation charge: \$300

### 1.4.2 Sir Wilfred Grenfell College

The fees and charges below are per semester, per person, unless otherwise noted.

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1. General residence fees: this fee will not be refunded and will not be credited to the student's account.
  - Residence application fee: \$20
2. Residence deposit: charged only to students who are applying to live in residence for the first time (due May 31 for Fall semester; November 15 for Winter semester). The deposit is creditable and may be refunded when all conditions pertaining to it are met.
  - Residence deposit: \$100
3. Residence fees during semesters
  - Room: \$1,005
  - Apartments
    - Single: \$1,201
    - Family Apartment (per month): \$500
    - Bachelor Unit (per semester): \$1,130
4. Residence fees between semesters: students who need to stay in residence between semesters may be accommodated providing space is available and reasonable notice is given in writing to Student Housing. Students are required to pay the full charge on receipt of notification of acceptance.
  - Room rates (per night, per person)
    - Apartment: \$12
    - Residence: \$10

### 1.5 Student Organization Fees

Student organization fees are collected by the University as a service to the student body. They are payable prior to, or at the time of, registration.

#### 1.5.1 St. John's Campus

All fees are per semester and are compulsory unless otherwise noted.

1. Undergraduate students (full-time)
  - General fees
    - Student Union fee: \$35
    - Canadian Federation of Students' fee (not collected Spring semester): \$3.66
    - Canadian Federation of Students - Newfoundland and Labrador fee (not collected Spring semester): \$3.66
    - Media Fee: \$4
  - Health/Dental Plans
    - Students who have alternative health and dental coverage may opt out of the plan(s) by completing a Waiver of Participation form at the MUNSU Office. The deadline to opt out of the health and dental plans for any given academic year is two weeks after the first day of lectures in September. Only students who were not full time or not enrolled in the Fall semester may opt out in the Winter semester. The deadline will be two weeks after the first day of classes.
    - Student Health Plan: \$81
    - Dental Plan: \$65
2. Undergraduate students (part-time)
  - Student Union fee: \$15
  - Canadian Federation of Students - Provincial (not collected Spring semester): \$1.57
  - Canadian Federation of Students - Federal (not collected Spring semester): \$3.66
  - Media fee: \$4
3. Graduate students
  - Union fee: \$20
  - Canadian Federation of Students - Provincial (not collected Spring semester): \$3.66
  - Canadian Federation of Students - Federal (not collected Spring semester): \$3.66
  - Drug and Health Insurance Plan fee (per annum): \$387.98
  - Dental Insurance Plan fee (per annum): \$181.16
4. Post-graduate residents and interns
  - Union fee (per annum): \$5
5. Nursing students (fee collected in the Fall semester)
  - Canadian Nursing Students' Association fee (full-time students, per annum): \$5
  - Canadian Nursing Students' Association fee (part-time students, per annum): \$3

#### 1.5.2 Sir Wilfred Grenfell College

1. Undergraduate Students (full-time)
  - Health Plan: \$68
  - Student Union fee: \$49
  - S.U.B. Fund (not collected Spring semester): \$5
  - Canadian Federation of Students - Newfoundland and Labrador fee (not collected Spring semester): \$3
  - Canadian Federation of Students' fee (not collected Spring semester): \$3
2. Undergraduates (part-time)
  - Union fees: \$11

### 1.5.3 International Student Health Insurance (varies from year to year)

1. All students (undergraduate and graduate) studying on a student visa at Memorial University of Newfoundland will be required, as a condition of registration, to purchase health insurance. Such students should check with the International Student Advisor for the current rate.

## 1.6 Fees and Charges Pertaining to Appeals

### 1.6.1 Challenge for Credit Fee

- Fee: one half of the fee associated with the credit hour value of the course

### 1.6.2 Supplementary Examination Fee

- Fee: \$50

### 1.6.3 Reread of Final Examination Fee

- Fee: \$50

## 1.7 Miscellaneous Fees and Charges

### 1.7.1 Recreation Fee (The Works)

Students must pay a recreation fee.

- Fee (St. John's Campus and Fisheries and Marine Institute)
- Per semester: \$40
- Per session: \$20

### 1.7.2 Student Parking Fees

Students may purchase permits on a semester or per annum basis.

- Per semester: \$13.80
- Per annum: \$41.40

### 1.7.3 Books and Supplies

1. Students should be prepared to meet an expenditure to cover the cost of textbooks and supplies each semester. Students should consult their professors before purchasing any new or used textbooks or laboratory manuals.

### 1.7.4 Damages or Destruction to University Property

1. Unwarranted damages or destruction to University property will be charged to the responsible party or parties, and are payable when assessed.

## 2 Admission/Readmission to the University (Undergraduate)

### 2.1 Admission/Readmission Information

This section applies to all undergraduate applicants except those applying to the Faculty of Medicine.

Applicants seeking admission to the Faculty of Medicine should refer to the Faculty of Medicine regulations for information.

Applicants seeking admission to a particular faculty or school may be required to submit a supplementary faculty or school application in addition to the application for admission/readmission and should refer to appropriate faculty or school regulations for procedures, deadlines, admission requirements and further information.

1. Applications for admission/readmission should be submitted by the deadline dates listed in the **University Diary**. Applications received later or post-marked later than the stated deadline dates will be processed as time and resources permit. Application forms and other information may be obtained by contacting the University in writing to the Admissions Office, Office of the Registrar, Memorial University of Newfoundland, St. John's, NL, A1C 5S7, or by e-mail at admissions@mun.ca or through the website at www.mun.ca.
2. Each application must be accompanied by a \$40.00 application processing fee. An additional application processing fee of \$40.00 is required from non-Canadian applicants or applicants transferring from post-secondary institutions outside of Newfoundland and Labrador. Neither fee is refundable nor will it be credited to the applicant's financial account under any circumstances. Information regarding other fees and charges is specified under **Fees and Charges**.
3. Applicants who have previously attended Memorial University of Newfoundland and have not registered for courses for the past two consecutive semesters (Fall, Winter, Spring) are required to submit a new Application for Admission/Readmission together with the \$40.00 application processing fee.
4. The admission criteria required of each category of applicant is specified under **Categories of Applicants, Admission Criteria And Required Documentation**.
5. Admission to some courses, programs and/or the University may be limited by the University when it deems the facilities and resources available to it are not adequate to provide for additional students. Consequently possession of the minimum requirements does not guarantee that an applicant will be granted admission to a course, a program and/or the University.
6. The University may set its own matriculation examinations either in separate subjects or in all those required for matriculation, and may refuse admission to any applicant failing to attain a satisfactory standard in these examinations.
7. The University reserves the right to refuse admission to any applicant.
8. Applicants may be required to provide medical evidence of their fitness to pursue university studies.

## 2.2 English Language Proficiency Requirements

Since English is the primary language of instruction at this University, all applicants seeking admission to Memorial University of Newfoundland must possess an adequate knowledge of written and spoken English as a prerequisite to admission. Regardless of country of origin or of citizenship status, applicants will be required to provide proof of proficiency in the English language based on one of the following forms.

### 2.2.1 English Language Secondary Institution

Applicants are required to have successfully completed the equivalent of three years of full-time instruction in an English language secondary institution as recognized by Memorial University of Newfoundland including successful completion of appropriate course(s) in English at the Grade XII or equivalent level. English as a Second Language (ESL) courses are not acceptable for meeting this requirement.

### 2.2.2 English Language Post-Secondary Institution

Applicants who have attended a recognized post-secondary institution where English is the language of instruction must have successfully completed the equivalent of 30 credit hours. These 30 credit hours must include 6 transferable credit hours in English courses. For information on transfer credit refer to **Transfer Credit**.

### 2.2.3 Test of English as a Foreign Language (TOEFL)

A minimum score of 550 is required on the paper-based test or 213 on the computer-based test of the Test of English as a Foreign Language (TOEFL). The official results of the TOEFL must be forwarded to Memorial University of Newfoundland directly from the Educational Testing Service.

Information regarding the TOEFL program is available from the Educational Testing Service (ETS), TOEFL/TSE Services, P.O. Box 6151, Princeton, New Jersey, U.S.A., 08541-6151, from U.S. embassies or consulates, or from offices of the U.S. Information Services. The Division of Lifelong Learning at Memorial University of Newfoundland is an official ETS testing center and may be contacted at (709) 737-7979 or online at [www.mun.ca/lifelonglearning](http://www.mun.ca/lifelonglearning).

Applicants will be required to write a placement test in English language prior to the commencement of classes to determine the appropriate course in English for which they should register. For further information refer to **English Language And Mathematics Placement Tests**.

### 2.2.4 Michigan English Language Assessment Battery (MELAB)

A minimum score of 85 is required on the Michigan English Language Assessment Battery (MELAB). The official results of the MELAB must be forwarded to Memorial University of Newfoundland directly from the appropriate testing authority.

Information on the Michigan English Language Assessment Battery (MELAB) testing program may be obtained from the Testing and Certificate Division, University of Michigan, 2001 North University Building, Ann Arbor, Michigan, U.S.A., 48109-1057.

Applicants will be required to write a placement test in English language prior to the commencement of classes to determine the appropriate course in English for which they should register. For further information refer to **English Language and Mathematics Placement Tests**.

### 2.2.5 Canadian Academic English Language (CAEL) Assessment

Minimum band scores between 50 and 60 in each of the four skills tested (Reading, Writing, Listening, Speaking), with at least two band scores of 60 are required on the Canadian Academic English Language (CAEL) Assessment. The official results of the CAEL must be forwarded to Memorial University of Newfoundland directly from the appropriate testing authority.

Information regarding the Canadian Academic English Language (CAEL) Assessment may be obtained from the Ottawa Test Centre, School of Linguistics and Applied Language Studies, Carleton University, 215 Paterson Hall, 1125 Colonel By Drive, Ottawa, Ontario, K1S 5B6.

Applicants will be required to write a placement test in English language prior to the commencement of classes to determine the appropriate course in English for which they should register. For further information refer to **English Language and Mathematics Placement Tests**.

### 2.2.6 Canadian Test of English for Scholars and Trainees (CanTEST)

Minimum band scores of 4.5 in the listening comprehension and reading comprehension sub-tests and a score of 4 in writing are required on the Canadian Test of English for Scholars and Trainees (CanTEST).

The official results of the CanTEST must be forwarded to Memorial University of Newfoundland directly from the appropriate testing authority.

Applicants will be required to write a placement test in English language prior to the commencement of classes to determine the appropriate course in English for which they should register. For further information contact the Department of English Language and Literature.

### 2.2.7 Memorial University of Newfoundland's Intensive English Program

Applicants are required to have successfully completed Memorial University of Newfoundland's Intensive English Program together with an acceptable score, as noted above in 2.2.5, on the CAEL administered by the Department of English Language and Literature at the University.

Applicants may be required to write a placement test in English language prior to the commencement of classes to determine the appropriate course in English for which they should register. For further information, refer to the section of this Calendar describing the Faculty of Arts' English as a Second Language programs.

### 2.2.8 International English Language Testing System (IELTS)

A minimum overall band score of 6.5, with at least band 6 in each of Writing and Reading. The official results of the IELTS must be forwarded to Memorial University of Newfoundland directly from the appropriate testing authority.

Information regarding the IELTS may be obtained from the IELTS Subject Officer, University of Cambridge Local, Examinations Syndicate, 1 Hills Road, Cambridge, CB1 2EU, U.K. or via [www.ielts.org](http://www.ielts.org).

Applicants will be required to write a placement test in English language prior to the commencement of classes to determine the appropriate course in English for which they should register. For further information refer to **English Language and Mathematics Placement Tests**.

### 2.2.9 Other

Other forms of proof of English language proficiency, acceptable to the University Committee on Admissions, may be considered.

Applicants will be required to write a placement test in English language prior to the commencement of classes to determine the appropriate course in English for which they should register. For further information refer to **English Language and Mathematics Placement Tests**.

## 2.3 Categories of Applicants, Admission Criteria and Other Information

The categories of applicants applying for admission/readmission as well as the admission criteria and other related information are listed below. Before a final admissions decision can be reached all required documents must be received. All documents must be official and be forwarded directly to the Admissions Office, Office of the Registrar from the appropriate institution(s) or source(s). Photocopied documents are not acceptable unless duly certified.

### 2.3.1 Applicants Who Have Followed the High School Curriculum of Newfoundland and Labrador

#### 2.3.1.1 Admission Criteria

The courses below are courses designed for students who intend to seek post-secondary education at the University or other institutions whose programs demand levels of proficiency equivalent to those required by the University. Applicants shall have completed Graduation Requirements for high school as set down by the Department of Education and obtained credits in the following subjects with an overall average of not less than 70% compiled from the grades received in those courses at the 3000 level.

- **English:** English 3201 (2 credits); or the former combination of Language 3101 (1 credit) and one of Thematic Literature 3201(2 credits) or Literary Heritage 3202 (2 credits).
- **Academic or Advanced Mathematics:** One of Mathematics 2200, 2201, 2204, or 2205 and one of Mathematics 3200, 3201, 3204, or 3205 (valued at 2 credits each).
- **Laboratory Science:** Four credits in Laboratory Science (i.e. Biology, Chemistry, Earth Systems, Physics), including at least two credits at the 3000 level chosen from one of Biology 3201, Chemistry 3202, Earth Systems 3209, or Physics 3204 (valued at two credits each). The remaining two credits may be selected from 2000-level courses in the above-noted subject areas or from Science 1206.
- **Social Science/Modern or Classical Language:** Two credits at the 3000 level in a Social Science area or in a Modern or Classical Language.
- **Electives:** Two credits at the 3000 level in elective courses chosen from the subjects above or from additional courses approved by the Department of Education for offering at the 3000 level for certificate purposes.

#### 2.3.1.2 Other Information

- **Early Final Acceptance:** Applicants in their final year of high school who have achieved a minimum overall average of not less than 85% in select 2000 level courses in the core subjects of English, Mathematics and Laboratory Science may be granted final admission prior to the release of final high school results. This does not preclude the application of selective admission criteria for particular faculty/school programs.
- **Provisional Acceptance:** Applicants in their final year of high school who are not eligible for Early Final Acceptance, but who have completed, or who are completing a slate of courses which meets the course requirements specified in **Applicants Who Have Followed the High School Curriculum of Newfoundland and Labrador**, may be granted provisional acceptance prior to the writing of final examinations. This provisional acceptance will remain valid until the final examination results are released by the appropriate authorities at which time a final determination of each applicant's admission status will be made. Provisionally accepted applicants who meet all requirements will be granted a final acceptance, whereas applicants who fail to meet all requirements will have their provisional acceptance revoked. This does not preclude the application of selective admission criteria for particular faculty/school programs.
- **Advanced Placement:** Applicants completing Advanced Placement courses through the Advanced Placement Program offered by the College board should also refer to **Transfer Credit Advanced Placement (AP)**.
- **English Language Proficiency Requirements** will apply to all applicants.

### 2.3.2 Applicants Who Have Followed the High School Curricula of Other Provinces of Canada

#### 2.3.2.1 Admission Criteria

- Applicants from other provinces of Canada are required to have successfully completed Grade XII in the University Preparatory Program (in the case of Quebec students, Secondary V Certificate) with a passing mark in each of the following Grade XII academic or advanced-level subjects and an overall average of not less than 70% compiled from the grades received in the courses selected:
  - English
  - Mathematics
  - Laboratory Science (1 of Biology, Chemistry, Earth Science, Geology or Physics)
  - Social Science/Modern Classical Language
  - Elective
- For further information concerning specific provinces, applicants may contact the University by writing to the Admissions Office, Office of the Registrar, Memorial University of Newfoundland, St. John's, NL, A1C 5S7, or by e-mail at [admissions@mun.ca](mailto:admissions@mun.ca) or through the website at [www.mun.ca](http://www.mun.ca).

### 2.3.2.2 Other Information

- **Early Final Acceptance:** Applicants in their final year of high school who have achieved a minimum overall average of not less than 85% in select Grade 11 courses in the core subjects of English, Mathematics and Laboratory Science may be granted final admission prior to the release of final high school results. This does not preclude the application of selective admission criteria for particular faculty/school programs.
- **Provisional Acceptance:** Applicants in their final year of high school who are not eligible for Early Final Acceptance but who have completed, or who are completing, a slate of courses which meets the course requirements in **Applicants Who Have Followed the High School Curricula of Other Provinces of Canada** may be granted provisional acceptance prior to the writing of final examinations. This provisional acceptance will remain valid until the final examination results are released by the appropriate authorities at which time a final determination of each applicant's admission status will be made. Provisionally accepted applicants who meet all requirements will be granted a final acceptance, whereas applicants who fail to meet all requirements will have their provisional acceptance revoked. This does not preclude the application of selective admission criteria for particular faculty/school programs.
- **Advanced Placement:** Applicants completing Advanced Placement courses through the Advanced Placement Program offered by the College Board should refer to **Transfer Credit Advanced Placement (AP)**.
- Applicants seeking credit for enriched High School Grade XII courses or Ontario Grade XIII/OAC courses should refer to **Transfer Credit Enriched Courses and Ontario Grade XIII/OAC**.
- **English Language Proficiency Requirements** will apply to all applicants.

### 2.3.3 Applicants For Concurrent Studies

#### 2.3.3.1 Admission Criteria

- Applicants in or about to enter their final year of high school with a superior academic record (i.e. normally an overall average of 85% or above) may apply to enrol in university courses (excluding distance education courses). The applicant for concurrent studies must be enrolled in a high school and completing a slate of courses that meets the course requirements for admission to the University as specified in **Applicants Who Have Followed the High School Curriculum of Newfoundland and Labrador**.
- Applicants will be required to submit a letter requesting enrolment in a specific course; an official high school transcript; and a letter from the high school principal or guidance counsellor clearly recommending admission for concurrent studies.
- Applicants must submit a completed application for admission/readmission together with the appropriate fee. For further information refer to **Fees and Charges**.
- An applicant for concurrent studies wishing to enrol in courses at the St. John's campus will be permitted to do so based on the recommendation of the University Committee on Admissions. Applicants wishing to enrol in courses at the Corner Brook campus will be permitted to do so based on the recommendation of the Special Admissions Committee at Sir Wilfred Grenfell College. Eligibility to enrol is limited to one semester but may be renewed on the recommendation of the relevant committee.
- Enrolment for concurrent studies students will normally be limited to three credit hours in a given semester. Fees and deadlines are the same as for regularly admitted students. University credit will be awarded after successful completion of the course(s) and successful completion of the requirements for admission to the University.

#### 2.3.3.2 Other Information

- **English Language Proficiency Requirements** will apply to all applicants.

### 2.3.4 Applicants Who Have Followed the Adult Basic Education Program (ABE)

#### 2.3.4.1 Admission Criteria

Applicants shall have completed the Level III Adult Basic Education Certificate (ABE) with the approved combination of thirty-six credits set down by the Department of Education and successfully completed, with an overall average of not less than 70%, the following courses as outlined below:

- **Communication Skills:** IC 3112 and IC 3321
- **Mathematics:** One of the following groups:
  - Mathematics: IM 3115, 3211, 3212, 3213 and 3216 **OR**
  - Mathematics: IM 3218, 3219 and 3221
- **Science:** One of the following patterns:
  - Biology: IB 3113, 3115, 3211, 3212A/B, 3214, 3316 **OR**
  - Chemistry: IH 3111, 3112, 3113, 3114, 3116, 3117, 3118, 3215 **OR**
  - Geology: IS 3212 **OR**
  - Physics: IP 3111, 3112, 3213, 3215, 3216

#### 2.3.4.2 Other Information

- **English Language Proficiency Requirements** will apply to all applicants.

### 2.3.5 Applicants For Mature Student Status

#### 2.3.5.1 Admission Criteria

- An applicant, 21 years of age or older within one month after the beginning of the semester or the session to which admission is being sought, who has not fulfilled the admission criteria outlined in any of the above categories may be admitted to the University with the approval of the University Committee on Admissions.
- Applicants for mature student status will be required to submit proof of age; two letters of reference from persons competent to assess the candidate's ability to proceed with university studies; a letter from the applicant outlining the grounds for requesting special consideration; and high school marks and marks from post-secondary institutions, if applicable.
- Applicants will be required to submit a completed application for admission/readmission together with the appropriate fee. For further information refer to **Fees and Charges**.



- Applicants for mature student status may be required to show through an interview that they possess the potential to proceed with university studies.
- Since admission as a mature student is not on the grounds of age alone, the University Committee on Admissions reserves the right to refuse admission to any applicant.

### 2.3.5.2 Other Information

- **English Language Proficiency Requirements** will apply to all applicants.

## 2.3.6 Applicants Who Are Senior Citizens

### 2.3.6.1 Admission Criteria

- An applicant, 60 years of age or older within one month after the beginning of the semester/session to which admission is being sought, may be admitted to the University as a senior citizen, upon submission of a birth certificate or other proof of age.

## 2.3.7 Applicants From Other Countries

Applicants from other countries not listed below may contact the University by writing to the Admissions Office, Office of the Registrar, Memorial University of Newfoundland, St. John's, NL, A1C 5S7, or by e-mail at admissions@mun.ca or through the website at www.mun.ca for further information.

### 2.3.7.1 United Kingdom - Admission Criteria

- Applicants from the United Kingdom are required to have the General Certificate of Education or the Scottish Leaving Certificate of Education with a minimum of "Ordinary" or "Lower-Level" passes in five subjects acceptable to the University Committee on Admissions.
- Applicants completing the "Higher Level" subjects of the Scottish Leaving Certificate and applicants completing the "Advanced Level" subjects of the General Certificate of Education should refer to **Transfer Credit**.
- Also refer to 2.3.7.4, **Other Information**.

### 2.3.7.2 Hong Kong, Malaysia, West Indies and West Africa - Admission Criteria

- Applicants from Hong Kong, Malaysia, West Indies and West Africa are required to have the General Certificate of Education with passes in five academic subjects at the "Ordinary Level" acceptable to the University Committee on Admissions.
- Applicants completing the "Advanced Level" subjects of the General Certificate of Education should refer to **Transfer Credit**.
- Also refer to 2.3.7.4, **Other Information**.

### 2.3.7.3 United States - Admission Criteria

- Applicants from the United States must have completed a High School University Preparatory Program (Grade XII) with a passing mark in the appropriate Grade XII course in each of the five areas listed below with an overall average of not less than 70% in the courses selected.
  - English
  - Mathematics
  - Laboratory Science (1 of Biology, Chemistry, Earth Science, Geology or Physics)
  - Social Science/Modern Classical Language
  - Elective
- Also refer to 2.3.7.4, **Other Information**.

### 2.3.7.4 Other Information

- **Early Final Acceptance:** Subject to satisfying the University's English Language Proficiency requirements, applicants from other countries in their final year of high school who present a minimum overall average of not less than 85% or equivalent in select courses in the core subjects of English, Mathematics and Laboratory Science, may be granted final admission prior to the release of final high school results. This does not preclude the application of selective admission criteria for particular faculty/school programs.
- **Provisional Acceptance:** Applicants in their final year of high school who are not eligible for Early Final Acceptance consideration but who have completed, or who are completing a slate of courses which meets the course requirements as specified under **Applicants From Other Countries** may be granted provisional acceptance prior to the writing of final examinations. This provisional acceptance will remain valid until the final examination results are released by the appropriate authorities at which time a final determination of each applicant's admission status will be made. Provisionally accepted applicants who meet all requirements will be granted a final acceptance, whereas applicants who fail to meet all requirements will have their provisional acceptance revoked. This does not preclude the application of selective admission criteria for particular faculty/school programs.
- Applicants from other countries should submit official matriculation certificates at least two months prior to the commencement of the semester to which they are seeking admission. Certificates in a language other than English or French should be accompanied by notarized English translations.
- Applicants from other countries may be required to submit with their application, a statement of satisfactory financial resources.
- **English Language Proficiency Requirements** will apply to all applicants.

## 2.3.8 Applicants Transferring From Other Recognized Universities or Colleges

### 2.3.8.1 Admission Criteria

- The admission of applicants from other recognized universities or colleges will be subject to the regulations for **Admission/ readmission to the University** in addition to **General Academic Regulations, Regulations for Continuance and Readmission**. In order to allow sufficient time for assessment of possible transfer credit, applicants should refer to **Transfer Credit** for information on the transfer credit application and evaluation process and requirements.

### 2.3.8.2 Other Information

- In addition to the \$40.00 non-refundable application processing fee, a fee of \$40.00 is required of all applicants who apply for admission from post-secondary institutions outside of Newfoundland and Labrador and/or non-Canadian applicants. Neither fee is refundable nor will it be credited to the applicant's financial account in any circumstances. For further information refer to **Fees and Charges**.
- Students applying for transfer from other recognized universities or colleges shall submit their High School Diploma and official transcript(s) from all universities and colleges attended. All documents must be forwarded directly to the Admissions Office, Office of the Registrar from the appropriate institution(s). These documents must be certified and official and received in the Office of the Registrar not later than two months prior to the first day of lectures in any semester, as stated in the **University Diary**. An application is not considered complete until these documents have been received.
- Applicants transferring from other universities or colleges should also see **Transfer Credit**.
- **English Language Proficiency Requirements** will apply to all applicants.

### 2.3.9 Applicants Who Are Requesting Special Admission

Where circumstances warrant, applicants not meeting the regulations for **Admission/Readmission to the University** may be admitted to Memorial University of Newfoundland with the approval of the University Committee on Admissions.

#### 2.3.9.1 Admission Criteria

- Applicants must submit a completed application for admission/readmission together with the appropriate fee. For further information refer to **Fees and Charges**
- Applicants must submit a letter to the Committee outlining the grounds for requesting special consideration and provide a letter from a school principal, guidance counsellor, employer or other responsible person substantiating those grounds.
- In order to allow sufficient time for reasonable and consistent consideration of special cases, supporting letters must be received at least one week prior to the beginning of the semester to which admission is being sought.

#### 2.3.9.2 Other Information

- **English Language Proficiency Requirements** will apply to all applicants.

## 2.4 English Language and Mathematics Placement Tests

In addition to the following, more detailed information regarding the English language and Mathematics placement tests is available from the Department of English Language and Literature and the Department of Mathematics and Statistics respectively.

### 2.4.1 English Language Placement Test

1. With the exception of applicants who demonstrate English language proficiency under the regulations, **English Language Proficiency Requirements, English Language Secondary Institution** and **English Language Post-Secondary Institution**, all other applicants will be required to write a placement test in English language. This test must be taken prior to the commencement of classes to determine the appropriate English course for which an applicant should register. For further information concerning English language proficiency requirements refer to **English Language Proficiency Requirements**.
2. Students whose performance in the placement test in English language indicates that appropriate placement is in English 102F will be required to register in, and successfully complete English 102F before registering in higher level courses in English.

### 2.4.2 Mathematics Placement Test

1. Applicants intending to register for the first time in any 1000 level mathematics course must submit a score for either an Advanced Placement Calculus Examination or other standardized tests acceptable to the Department of Mathematics and Statistics.
2. Students whose score in the Advanced Placement Calculus examination or other standardized test is not acceptable to the Department of Mathematics and Statistics will be required to register in a mathematics course determined by the Department of Mathematics and Statistics.

## 2.5 Transfer Credit

Applicants wishing to be considered for advanced standing or transfer credit must submit, in addition to the Application for Admission/Readmission, an Application for Transfer Credit Evaluation which can be obtained from the Office of the Registrar.

Official transcript(s) and calendar descriptions and/or outlines of courses claimed for credit are also required and should be sent directly to Memorial University of Newfoundland from the institution attended.

In order to allow sufficient time for evaluation, these documents should be received at least two months prior to the commencement of the registration period for the semester to which the applicant is seeking admission. It is the student's responsibility to provide the pertinent documents, and until they are received, the Office of the Registrar is unable to commence an evaluation or to advise students of their standing at this University.

When transfer credit is awarded for work completed at another institution, only equivalent Memorial University of Newfoundland course(s) and credit(s) are recorded on the Memorial University of Newfoundland transcript. Grades received from other institutions are not recorded nor included in averages.

Applicants who have not received the results of a transfer credit evaluation prior to the assigned registration time for the semester in which they propose to begin studies should contact the Admissions Office for further assistance.

Outlined below are the various categories for which transfer credit may be considered.

### 2.5.1 Advanced Placement (AP)

- Memorial University of Newfoundland may recognize for transfer credit certain courses completed through the Advanced Placement Program offered by the College Board. Award of credit for AP courses will be subject to the achievement of a minimum grade of 3 in each subject claimed for credit (in certain subjects a minimum grade of 4 may be required).
- Award of credit for AP courses will be subject to evaluation and recommendation by the appropriate University academic unit and University Regulations.
- The applicability of all transfer credits, whether specified or unspecified, is subject to appropriate program regulations.

- Information regarding course equivalencies can be obtained from the Admissions Office, Office of the Registrar.

### 2.5.2 Enriched Courses And Ontario Grade XIII/OAC

- Certain Grade XII enriched courses and certain Ontario Grade XIII/OAC subjects may be recognized for introductory (normally first year) credits, where applicable, provided that the subjects claimed for credit are recommended as equivalent to Memorial University of Newfoundland courses by the relevant University academic unit(s). In addition, the applicant must have obtained an overall average in these courses of not less than 65% with a passing grade in each subject claimed for credit. Applicants who have not obtained the overall average requirement of 65% in these courses will be required to have obtained a mark of not less than 65% in individual subjects claimed for credit.
- Award of credit for Grade XII enriched and Ontario Grade XIII/OAC courses will be subject to evaluation and recommendation by the appropriate University academic unit(s) and University Regulations.
- The applicability of all transfer credits, whether specified or unspecified, is subject to appropriate program regulations.
- Information regarding course equivalencies can be obtained from the Admissions Office, Office of the Registrar.

### 2.5.3 Advanced Or Higher Levels

- The "Advanced Level" subjects of the General Certificate of Education will generally be accepted for credit to a maximum of 12 credit hours in each subject provided that a minimum grade of 'D' in each subject claimed for credit has been obtained.
- The "Higher Level" subjects of the Scottish Leaving Certificate will generally be accepted for credit at the first year level.
- Award of credit will be subject to evaluation and recommendation by the appropriate academic unit(s) and University Regulations.
- The applicability of all transfer credits, whether specified or unspecified, is subject to appropriate program regulations.
- Information regarding course equivalencies can be obtained from the Admissions Office, Office of the Registrar.

### 2.5.4 International Baccalaureate Diploma

- Memorial University of Newfoundland will consider for transfer credit the "Higher Level" subjects and certain "Standard" or "Subsidiary" level subjects, provided that the subjects claimed for credit are recommended as equivalent to Memorial University of Newfoundland courses by the relevant University academic unit(s), and the candidate has achieved a minimum grade of 4 in individual subjects claimed for credit. In certain subjects a minimum grade of 5 may be required.
- The applicability of all transfer credits, whether specified or unspecified, is subject to appropriate program regulations.
- Information regarding course equivalencies can be obtained from the Admissions Office, Office of the Registrar.

### 2.5.5 Member Institutions of the Association of Universities and Colleges of Canada (AUCC)

- All university-level course work completed by transfer students during the first two years of university study taken at universities/colleges that are ordinary members of the Association of Universities and Colleges of Canada (AUCC) will be recognized for transfer credit. In the first instance, the evaluation of such course work for appropriate credit will be conducted by University academic units. In instances where appropriate credit cannot be granted by academic units or where no University academic unit exists at this University for the evaluation of particular transfer credits, the Office of the Registrar will award the appropriate unspecified credits in an unspecified discipline.
- Applicants who have completed course work beyond the first two years of university study may be considered for further transfer credit subject to evaluation and recommendation by the appropriate academic unit(s) and University Regulations.
- The applicability of all transfer credits, whether specified, unspecified or in an unspecified discipline, is subject to appropriate program regulations.
- Information regarding course equivalencies can be obtained from the Admissions Office, Office of the Registrar.

### 2.5.6 Other Universities, Colleges and Institutes

- Memorial University of Newfoundland may recognize for transfer credit certain courses offered by the College of the North Atlantic, the Fisheries and Marine Institute of Memorial University of Newfoundland, and certain other community colleges, technical colleges, institutes and CEGEPs.
- Memorial University of Newfoundland may recognize for transfer credit certain courses offered by other recognized universities or university colleges.
- Award of credit will be subject to evaluation and recommendation by the appropriate academic unit(s) and University Regulations.
- The applicability of all transfer credits, whether specified or unspecified, is subject to appropriate program regulations.
- Information regarding course equivalencies can be obtained from the Admissions Office, Office of the Registrar.

### 2.5.7 Caribbean Advanced Proficiency Exams

- Memorial University of Newfoundland may recognize for transfer credit certain courses completed through the Caribbean Advanced Proficiency Examinations. These examinations will generally be accepted for credit to a maximum of 12 credit hours for each 2 unit course and 6 credit hours for each 1 unit course.
- Credit will be considered on an individual basis and award of credit will be subject to evaluation and recommendation by the appropriate University academic unit(s) and University Regulations.
- The applicability of all transfer credits, whether specified, unspecified or in an unspecified discipline, is subject to appropriate program regulations.
- Information regarding course equivalencies can be obtained from the Admissions Office, Office of the Registrar.

## 2.6 Challenge for Credit

Memorial University of Newfoundland recognizes that some students may have achieved competence in certain subject areas through experience gained elsewhere. This experience, which may warrant consideration for academic credit at the undergraduate level, may consist of courses taken at "non-university" institutions or skills acquired from work or learning outside the university. It should be noted that challenge for credit is not offered for Work Terms or Internships.

Since course challenge is not offered by all academic units nor for all courses within a unit, students are advised to consult with the

appropriate academic unit to determine whether or not a particular course is offered for challenge.

Where challenge for credit is offered, it is available under the following conditions:

1. Challenge for credit is available only to those students who have applied for admission or who are currently registered at the University.
2. Applications to challenge for credit are available at the Office of the Registrar. Completed applications must be submitted to the Office of the Registrar and must receive approval from the head of the academic unit offering the course(s). The academic unit may require documentary material from the student and/or an interview before making its decision whether or not to accept the challenge. The academic unit involved will be responsible for deciding the scheduling and appropriate method of evaluation, which may consist of a variety of possible modes of evaluation including written, practical and oral.
3. A student who has applied for transfer credit evaluation may not apply to challenge for credit until the transfer credit evaluation has been completed.
4. Memorial University of Newfoundland will consider for credit courses that have been granted credit through a challenge for credit process by another recognized university or college. Award of credit will be subject to University Regulations and evaluation and recommendation by the appropriate academic unit(s).
5. For the purpose of satisfying the regulations residence requirements for a first degree and residence requirements for a second degree under **General Academic Regulations (Undergraduate)**, a successful challenge for credit shall be considered the equivalent of a transfer credit and shall be recorded on the transcript as a pass (PAS). Challenge grades are not included in averages. For further information refer to **Residence Requirements for a First Degree** and **Residence Requirements for a Second Degree**.
6. The appropriate fee must be paid at the time of application. For further information refer to **Fees and Charges**. If the application is accepted for consideration, the fee is not refundable nor is the student permitted to withdraw the challenge.

### 3 Academic Advising

During their period of study at the University, students are expected to make some very important academic decisions, the consequences of which can significantly affect the course of their academic careers. While the responsibility for making these decisions rests with students individually, they are not expected to make such decisions without access to sound academic advice.

Students should seek advice on matters such as course selection, registration, dropping/adding course registrations, selecting/changing an academic program, entrance requirements for degree programs and interpretation of university regulations. It is especially true that students in the early stages of their degree program should seek academic advice.

Students who are considering enrolling at the University or who are in their first year of study at the University or who have not declared an academic program can obtain academic advice from the following sources: those students attending the St. John's Campus should contact the Academic Advising Centre, Office of the Registrar, located in the Science Building room SN 4053, at (709) 737-8801; those students attending the Sir Wilfred Grenfell College campus should contact the Senior College Academic Adviser at the Office of the Registrar, located in the Arts and Science Building in room AS 270, at (709) 637-6298.

Students who have declared their major or have been accepted to a School or Faculty can obtain academic advice from a faculty adviser assigned by their School/Faculty/Department. Students should contact the head of the relevant academic unit to be assigned a faculty adviser.

Students are also encouraged to approach their professors for academic advice or for referral to the appropriate source of advice.

While it is the responsibility of students to see that their academic programs meet regulations in all respects, academic advice is provided as a service of the University.

### 4 General Academic Regulations (Undergraduate)

Memorial University of Newfoundland is governed by the principles of fairness, academic integrity and the timely provision of information and by regulations whose purpose is to ensure fair and equitable treatment for the entire University community. Some regulations deal with the normal workings of the University (continuance, registration deadlines, etc.) and pertain to all undergraduate students. Other regulations, however, especially those concerned with classification of degrees and academic conduct, apply to certain students in certain specific situations.

The Office of the Registrar will assist students with any questions or problems which arise concerning the interpretation of regulations. It is, however, the responsibility of the student to see that his or her program meets University regulations in all respects. Every student has the right to request waiver of **General Academic Regulations (Undergraduate)**. In addition, every student has the right to appeal decisions resulting from a request for waiver of **General Academic Regulations (Undergraduate)**. For further information refer to **Waiver of Regulations** and **Appeal of Regulations**.

Descriptions and regulations for individual programs can be found in the appropriate academic-unit section of this Calendar. The terminology is explained in the **Glossary of Terms Used in This Calendar**.

#### 4.1 Classification of Students

##### 1. Full-time students:

- a. Students who have been admitted to this University and who are registered for the duration of any semester in at least 9 credit hours or at least 5 credit hours in a session are deemed full-time students.
  - b. Notwithstanding the above and the regulations governing the Marine Institute technology diploma programs, students who have been declared as pre-Bachelor of Technology or pre-Bachelor of Maritime Studies are deemed full-time students if they are registered for either: three non-degree courses and a minimum of 3 degree credit hours, or two non-degree courses and a minimum of 6 degree credit hours.
  - c. Students who are registered for the duration of any semester in a co-operative education work term, the internship required of the Computer Industry Internship Option (CIIO), or the studentship required of the School of Pharmacy will be deemed full-time students.
  - d. Provided he or she has been admitted to the University, the President of the Memorial University of Newfoundland Student Union (MUNSU) shall be deemed, for the purpose of membership on University committees, the Senate and the Board of Regents, to be a full-time student during his or her tenure, to a maximum of one term, while President of the Union.
2. **Part-time students** are students who have been admitted to the University and who are registered for fewer than 9 credit hours in any semester or fewer than 5 credit hours in any session.
  3. **First-year students** are students who have earned fewer than 18 credit hours.

4. **Second-year students** are students who have earned from 18 to 47 credit hours inclusive.
5. **Third-Year Students** are students who have earned from 48 to 77 credit hours inclusive.
6. **Fourth-Year Students** are students who have earned from 78 to 107 credit hours inclusive.
7. **Fifth-Year Students** are students who have earned not fewer than 108 credit hours.

## 4.2 Degree and Departmental Regulations

Every student seeking a bachelor's degree shall comply with all the course requirements governing the award of that degree.

### 4.2.1 Year of Degree and Departmental Regulations - Faculty of Arts and Faculty of Science

1. A student completing a degree program in the Faculty of Arts or in the Faculty of Science will normally follow the degree regulations in effect in the academic year in which the student first completes a course(s) at Memorial University of Newfoundland. However, the student may elect to follow subsequent regulations introduced during the student's tenure in a program.
2. In the case of departmental regulations for a major or minor, a student will normally follow regulations in effect in the academic year in which the student first completes a course in that subject at the 2000 level or above which may be applied to the major or minor program respectively. However, the student may elect to follow subsequent regulations introduced during the student's tenure in a program.

### 4.2.2 Year of Degree and Departmental Regulations - All Other Faculties and Schools

1. A student registered in any faculty or school, other than the Faculty of Arts or the Faculty of Science, will normally follow regulations in effect in the academic year in which the student first completes a course(s) in that faculty or school following formal admission to that program. However, the student may elect to follow subsequent regulations introduced during the student's tenure in a program.
2. A student in either the Faculty of Business Administration, Faculty of Education, Faculty of Engineering and Applied Science, or Faculty of Medicine who fails to obtain promotion or is not registered for full-time studies for one or more semesters and is readmitted to full-time studies in the faculty will normally follow regulations in effect at the time of readmission.
3. A student in the School of Music who is required to withdraw from the Bachelor of Music degree program for academic reasons, or who has withdrawn from the principal applied study course will normally follow regulations in effect at the time the student is readmitted to the School. However, the student may elect to follow subsequent regulations introduced during the student's tenure in a program.

### 4.2.3 Further Credentials

1. Students may obtain more than one undergraduate degree at this University but not in the same major subject. Students are also encouraged to consider proceeding to more advanced studies at the honours or graduate level.
2. A student will not be awarded the same bachelor's degree more than once by this University (e.g., if a student has been awarded a Bachelor of Arts degree from this University the student will not be awarded a second Bachelor of Arts degree from this University).
3. A student who has completed a Bachelor's degree from this University may complete the requirements for another major or minor. A notation indicating the completion of the requirements for the additional major or minor will be included on the student's academic record.
4. For further information refer to **Residence Requirements - Second Degree**.

### 4.2.4 Time Limits

1. Notwithstanding these regulations, the University may place limits on the time permitted to complete a program under any given set of regulations. In addition, detailed scheduling of courses and/or practical experience, e.g., work terms, internships, field placements, may be changed as the University deems appropriate or necessary.

## 4.3 Residence Requirements

### 4.3.1 General Information

1. Residence requirements are met by attendance at classes on a campus and/or by the number of credit hours completed at this University.

### 4.3.2 First Degree

1. For a first bachelor's degree students shall have completed a minimum of 24 credit hours through attendance at classes on the campus of a recognized university or university college. Distance education courses may be used to satisfy the requirements of this clause only for the degrees of Bachelor of Business Administration, Bachelor of Business Administration (Honours), Bachelor of Commerce, Bachelor of Commerce (Honours), Bachelor of Maritime Studies, Bachelor of Nursing (Post-RN) and Bachelor of Technology.
2. Students shall complete at this University the last 30 credit hours required for the degree. There are exceptions to this requirement as follows:
  - Where special circumstances warrant, and only if at least half the courses required for the degree are completed at this University, the appropriate committee on undergraduate studies may permit students to complete, at another recognized institution, not more than 15 of the last 30 credit hours or equivalent required for the degree. The courses which comprise those credit hours must be approved by the appropriate academic unit.
  - Courses taken at universities and/or colleges which are included in formal institutional exchange agreements with this University are not subject to the requirements of this clause.
  - Courses taken at Francophone universities, as required under specific degree program regulations, are not subject to the requirements of this clause.
3. Students who have taken courses in the subject of their major at another university are required to complete at least 12 credit hours in that subject at this University.

### 4.3.3 Second Degree

A student who has already completed a bachelor's degree may undertake a second bachelor's degree, but not in the same major, subject to the condition outlined below:

1. Every student for a second bachelor's degree shall complete at least 30 credit hours at this University beyond those required for the first degree. These credit hours must be applicable to the degree sought. Students who have completed a first degree at this University may be permitted to take at another university up to 6 of the 30 credit hours required in this clause.

## 4.4 Registration

### 4.4.1 General Information

1. The University provides two methods for registration: the Student Web/Self-Service at [www.mun.ca/regoff/](http://www.mun.ca/regoff/) or the Telephone Registration System (TRS) at (709) 733-9949.
2. No student may register after the end of the registration period. In the case of accelerated courses and courses offered outside the normal time frame of a semester or session the registration period will be prorated with respect to all associated deadlines.
3. The University reserves the right to require a student to withdraw without academic prejudice from a course, courses, or program in which the student is improperly registered.

### 4.4.2 Student Responsibility

1. Students are strongly encouraged to seek academic advice before registering.
2. The responsibility for taking all steps necessary for registering and ensuring that a student's registration is appropriate, correct, and proper rests solely with the student. The University will make every effort, through its various academic counseling and advising services, to ensure that students are informed of the suitability and accuracy of their registrations.
3. Students must register for courses at or after the assigned registration time and before the end of the registration period as defined in the University Diary.

### 4.4.3 Registration Priority

1. The University uses a registration priority system that assigns the date and time that students register. Priority for registration is determined by a combination of three factors: closeness to graduation (i.e., number of credit hours completed); a student's academic achievement (i.e., GPA), and a student's program of study (i.e., degree, major, minor).
2. Academic units may reserve spaces in course sections for students in a particular degree, major, minor, or the like.
3. For further information on registration priority consult the publication *Undergraduate Registration Procedures*.

## 4.4.4 Adding Courses

### 4.4.4.1 General Information

- Specific deadlines for adding courses in any semester or session are stated in the University Diary. In the case of sessions, accelerated courses, and courses offered outside the normal time frame of a semester or session, deadlines for adding courses will be prorated accordingly.
- No course will be considered to have been added until the Registrar has received official notification and certified the add.
- Attending classes or informing an instructor of the intent to add a course does not constitute an official adding of a course.
- Only under special circumstances may a course(s) be added after the end of the registration period. For information contact the Office of the Registrar.
- Before the end of the registration period a student may, upon formal notification to the Registrar, change the course(s) for which he or she was originally registered by adding and/or dropping a course(s).

### 4.4.5 Course Weight/Course Load

Course load is the sum of course weights. In a session the course load is double. For the purposes of determining course load, each course is weighted with the credit hour value associated with that course, unless otherwise specified as follows:

- The course weight of each of the A and B components of a linked course shall be equivalent to one half of the credit hour value of the B component.
  - The course weight of courses with C or F as the last character shall be three.
  - The course weight of courses with W as the last character will vary according to individual program requirements.
1. **Semester Course Load:** The normal course load in a semester shall be 15 credit hours, except where academic regulations require more than that number. No student shall register for more than 15 credit hours or more credit hours than required by degree regulations in a semester except with the written permission of the dean, director, principal, or executive director of the student's faculty, school, college or institute.
  2. **Session Course Load:** The normal course load in a session shall be 6 credit hours. No student shall register for more than 6 credit hours in a session except with the written permission of the dean, director, principal, or executive director of the student's faculty, school, college or institute.

## 4.4.6 Dropping Courses

### 4.4.6.1 General Information

- Specific deadlines for dropping courses in any semester or session are stated in the University Diary. In the case of sessions, accelerated courses, and courses offered outside the normal time frame of a semester or session, deadlines for dropping courses without academic prejudice will be prorated accordingly.
- No course will be considered to have been dropped until the Registrar has received official notification and certified the drop.
- Ceasing to attend classes, or informing an instructor of the intent to drop a course, does not constitute an official dropping of a course.

- A student who drops all courses in any given semester will be considered to have withdrawn from the University for that semester. A student who has withdrawn from the University, before the start of classes in any semester, is deemed to be not registered for that semester. For information regarding applying for readmission to the University refer to **Admission/Readmission to the University (Undergraduate)**.
- In the event that a student drops a co-requisite course, the student will be required to drop the course for which that course is a co-requisite.
- Before the end of the registration period a student may, upon formal notification to the Registrar, change the course(s) for which he or she was originally registered by adding and/or dropping a course(s).

#### 4.4.6.2 Dropping Courses Without Academic Prejudice

- Until the end of the second week following the first day of lectures in any semester, a student may, upon formal notification to the Registrar, drop a course without academic prejudice. A course dropped under these circumstances will not be entered on the student's record.
- From the beginning of the third week to the end of the seventh week following the first day of lectures in any semester, a student may, upon formal notification to the Registrar, drop a course without academic prejudice. A grade of DR will be assigned in these circumstances and will be entered on the student's record.
- From the beginning of the eighth week following the first day of lectures in any semester to the last day to add courses in the following semester, a student who is prevented from completing the requirements of a course by illness, bereavement, or other acceptable cause, duly authenticated in writing, may drop a course without academic prejudice. This may occur only with the approval of both the course instructor and the head of the academic unit of the student's program or in the case of students who have not declared a program, the head of the academic unit of the course in question. A grade of DR will be assigned in these circumstances and will be entered on the student's record.

#### 4.4.6.3 Dropping Courses With Academic Prejudice

Students dropping courses except under the provisions outlined under **Dropping Courses Without Academic Prejudice** will have the letter grade of DRF and a numeric grade of 0% entered on his or her record for each course dropped.

#### 4.4.6.4 Work Terms

Students registered for a co-operative education work term should refer to the appropriate academic-unit section of this calendar with respect to regulations regarding work terms.

#### 4.4.6.5 Tuition Fee Implications

- A student who drops a course within two weeks following the first day of lecture in any semester will not be liable for tuition fees for that course. Tuition fee refunds for dropping courses after that period will be prorated in accordance with **Fees and Charges - Tuition Refunds Based on Withdrawal from Course(s)**.
- In the case of sessions, accelerated courses, and courses offered outside the normal time frame of a semester or session, deadlines for dropping courses without financial liability will be prorated accordingly.

### 4.4.7 Withdrawing from the University

#### 4.4.7.1 General Information

- A student who drops all courses in any given semester will be considered to have withdrawn from the University for that semester. A student who has withdrawn from the University, before the start of classes in any semester, is deemed to be not registered for that semester. For information regarding applying for readmission to the University refer to **Admission/Readmission to the University (Undergraduate)**.
- A withdrawal is not official until the Registrar has received official notification and certified the changes.
- Ceasing to attend classes, or informing an instructor of the intent to drop a course, does not constitute an official withdrawal.

#### 4.4.7.2 Withdrawing from the University Without Academic Prejudice

- Until the end of the second week following the first day of lectures in any semester as stated in the University Diary, a student may, upon formal notification to the Registrar, withdraw from the University without academic prejudice. Courses dropped under these circumstances will not be entered on the student's record.
- From the beginning of the third week to the end of the seventh week following the first day of lectures in any semester as stated in the University Diary, a student may, upon formal notification to the Registrar, withdraw from the University without academic prejudice. The letter grade DR will be assigned to all courses in these circumstances.
- From the beginning of the eighth week following the first day of lectures in any semester to the last day to add courses in the following semester as stated in the University Diary, a student who is prevented from completing the semester by illness, bereavement, or other acceptable cause, duly authenticated in writing, may withdraw from the University without academic prejudice. This may occur only with the approval of the dean, director, principal, or executive director of the student's faculty, school, college or institute and upon formal notification to the Registrar. The letter grade DR will be assigned to all courses in these circumstances.
- Students who withdraw from the University for medical reasons for one or more semesters may not be permitted to re-enter unless they can provide medical evidence, satisfactory to the Director of Student Health Service, of fitness to pursue studies.

#### 4.4.7.3 Withdrawing from the University With Academic Prejudice

Any student dropping courses except under the provisions outlined under **Withdrawing from the University Without Academic Prejudice** will have the letter grade DRF and a numeric grade of 0% entered on his or her record for each course withdrawal.

#### 4.4.7.4 Work Terms

Students registered for a co-operative education work term should refer to the appropriate academic-unit section of this calendar with respect to regulations governing withdrawing from work terms.

#### 4.4.8 Auditing of Courses

1. Individuals auditing courses must have met the University's admission or readmission requirements as stated in **Admission/Readmission to the University (Undergraduate)**.
2. In order to audit any course, an individual must receive permission from the instructor in that course and the head of the academic unit in which the course is offered. Permission cannot be given until the number of registrations is known. Factors to be considered shall include class size, impact on students registered for credit, and other matters judged relevant by the academic unit.
3. Individuals auditing courses shall limit their participation to that deemed appropriate by the instructor.
4. Auditors are not permitted to write formal examinations or have their work formally assessed.
5. Audited courses will not be considered as meeting prerequisites, admission, or course requirements for any undergraduate programs, nor will audited courses be listed on the individual's transcript of University studies.

#### 4.5 Attendance

1. Attendance regulations must be approved by the Senate and will be allowed only in cases where the academic unit has demonstrated that attendance is necessary for safety reasons, for teaching practical skills, or for attaining other clearly specified objectives. This may include an attendance regulation that may, by itself, cause a student who contravenes the regulation to fail or be dropped from a course.
2. The course where an attendance regulation is to be enforced must have the statement "attendance required" included in the calendar description.

#### 4.6 Evaluation

##### 4.6.1 Method of Evaluation

1. The method of evaluation in any course shall be determined by the academic unit subject to all University regulations

##### 4.6.2 Informing Students of the Method of Evaluation

1. The method of evaluation and required prerequisites or co-requisites shall be made known to students before the end of the first week of lectures in any semester or session.
2. This information shall be in typewritten or computer-generated format and shall be provided in paper form to the students present in each class during the first week of lectures. In the case of Web-based courses, this information may be provided electronically.
3. The following shall be included in the explanation of the method of evaluation:
  - the allocation of marks for all parts of the evaluation, e.g., assignments, laboratory projects, presentations, tests, mid-term examinations, final examinations;
  - the approximate dates of all parts of the method of evaluation that will take place in class, e.g., tests, mid-term examinations, presentations, and assignments; and
  - the dates on which all parts of the evaluation to be completed out of class are due.
4. When it is determined that there will be a common final examination for day and evening sections of a course, students must be so informed in the explanation of the method of evaluation for the course and prior to the end of the registration period.

##### 4.6.3 Changing the Method of Evaluation

1. The explanation of the method of evaluation, as made available to the class in the first week of lectures, shall be changed only if:
  - exceptional circumstances warrant the change; and
  - the head of the academic unit approves the proposed change; and
  - accommodation is made for students who demonstrate to the faculty member that they are disadvantaged by the change.

##### 4.6.4 Good Writing Skills

1. Regardless of the method of evaluation, good writing skills are required for effective communication. Students are, therefore, expected to demonstrate proficiency in logical organization, clarity of expression and grammatical correctness in their writing. For further information refer to **Grading - Good Writing**.

##### 4.6.5 Completing a Course

1. When it is prescribed that students, once registered, must complete a particular course, it is understood that they shall, when required, attend lectures given in the course, perform laboratory projects, and exercises that may be assigned and any other written or oral exercises prescribed, write or otherwise answer tests and examinations given in the course throughout the semester or session, including any final examinations, and shall obtain an overall passing grade in the course in accordance with the prescribed evaluation procedures.

#### 4.7 Examinations

##### 4.7.1 Scheduling of Examinations

1. No laboratory examinations totalling more than one laboratory period in length shall be given in any laboratory course in any week during a lecturing period in any semester or session. Such examinations shall be administered in the laboratory time period assigned for that course section. The application of this clause in the Faculty of Engineering and Applied Science and the Faculty of Medicine is subject to interpretation by the appropriate committee on undergraduate studies. The Senate Committee on Undergraduate Studies may grant a waiver of this clause for laboratory examinations in individual courses in a given term upon recommendation of the appropriate committee on undergraduate studies. Such waivers will be considered only if it can be shown that such laboratory examinations do not conflict with regularly scheduled sessions of another course for any student involved.
2. Any other examinations shall not extend beyond the class period assigned to that course section in any week during a lecturing period in any semester or session. The application of this clause in the Faculty of Engineering and Applied Science and the Faculty of Medicine is subject to interpretation by the appropriate committee on undergraduate studies. The Senate Committee on



Undergraduate Studies may grant a waiver of this clause for examinations in individual courses in a given term upon recommendation of the appropriate committee on undergraduate studies. Such waivers will be considered only if it can be shown that such examinations do not conflict with regularly scheduled sessions of another course for any student involved.

3. During the last two weeks of the lecturing period in any semester or the last week of the lecturing period in any session, no examinations or assignments, whether in-class or take home, shall be administered or assigned. However, assignments of which students have been notified under **Evaluation** may be submitted and oral and laboratory examinations may be administered. Courses taught outside the regular time-frame are exempt from the application of this regulation. The appropriate faculty or school undergraduate studies committee may, upon the recommendation of the head of an academic unit, grant a waiver of this clause with the proviso that the total value of all examinations or assignments thereby permitted in a course shall not exceed 20% of the final mark in that course. Such waivers will be considered only in exceptional circumstances or in the case of particular courses where it can be shown that the nature of the course determines the need for evaluation during the normally prohibited period. In the latter case, students must be notified of the method of evaluation in accordance with **Evaluation**. At the end of each semester, the Senate Committee on Undergraduate Studies must be notified of waivers granted.
4. No examinations of any nature shall be held between the last day of lectures and the start of the formal examination period in any semester or session. The application of this clause to the Faculty of Education (with respect to accelerated courses), the Faculty of Medicine, the School of Human Kinetics and Recreation (with respect to accelerated courses and courses offered outside the normal time frame during the Spring semester) and the School of Nursing is subject to interpretation by the appropriate committee on undergraduate studies.
5. In the event of an officially declared emergency which results in the cancellation or interruption of in-class examinations or tests previously scheduled and notified to be held in the final class period of the third last week of lectures of a semester or the second last week of lectures of a session, teaching units may reschedule such examinations or tests in the next regularly scheduled class or as early as possible in the second last week of lectures of a semester or the last week of lectures of a session. In no circumstances can the rescheduled examinations or tests be held in the last week of lectures of a semester.

#### 4.7.2 Scheduling of Final Examinations

1. Final examinations, if any, whether of the normal two-hour duration or longer, shall be held in each course at the end of the semester during which it was given in accordance with the schedule of examinations published by the Office of the Registrar. The application of this clause to the Bachelor of Education (Intermediate/Secondary) and all degree programs offered by the School of Human Kinetics and Recreation is subject to interpretation by the appropriate committee on undergraduate studies.
2. Normally, course sections offered during the day will have their final examinations, if any, scheduled in the day, and course sections offered in the evening will have their final examinations, if any, scheduled in the evening. When a student is unable for good reason to write a final examination scheduled outside the provisions of this clause, the student will be entitled to write a deferred examination. For further information refer to **Exemptions From Final Examinations and Procedures for Applying to Write Deferred Examinations**.
3. When an academic unit determines that there will be a common final examination for day and evening sections of a course, students must be so informed in the explanation of the method of evaluation for the course and prior to the end of the registration period.
4. Where possible, academic units should inform the Office of the Registrar when they submit their class schedules if it is anticipated that a common final examination will be required for day and evening sections of a course, so that this information can be publicized in the class schedule for the appropriate semester. Academic units should indicate whether the examination is to be held during the day or the evening.

#### 4.7.3 Exemptions From Final Examinations and Procedures for Applying to Write Deferred Examinations

1. A student who is prevented from writing a final examination by illness or bereavement or other acceptable cause, duly authenticated in writing, may apply, with supporting documents, to have the course graded or have the final examination deferred. This application must be made within one week of the original date of the examination to the head of the appropriate academic unit.
2. The decision regarding the request of the student to have a course graded or have the final examination deferred, including information on the appeals route open to the student in the case of a negative decision, must be communicated in writing to the student and to the Registrar within one week of the receipt of the student's complete application. For further information refer to **Appeal of Regulations**.
3. In those cases where the academic unit accepts the extenuating circumstances the student may be permitted to write a deferred examination or, with the consent of both the academic unit and the student, the grade submitted may be based on term work alone. An interim grade of ABS will be assigned by the academic unit in the case of a student granted a deferred examination. This grade will be replaced by the final grade which must be received by the Registrar within one week following the start of classes in the next academic semester or session.
4. A student who is prevented from writing a deferred examination by illness, bereavement, or other acceptable cause, duly authenticated in writing, may apply, with supporting documents, to the head of the appropriate academic unit to have the deferred examination further deferred. This application must be submitted within one week of the scheduled date of the deferred examination. The examination will be postponed to a time not later than the last date for examinations in the semester following that in which the student was enrolled in the course.

#### 4.7.4 Access to Final Examination Scripts

1. A student has a right to see his or her final examination script. However, the script is the property of the University and the University retains full possession and control of the script at all times. This regulation upholds the authority and judgement of the examiner in evaluation.
2. To access a final examination script, a student must make a written request to the head of the academic unit in which a course is offered. This request is subject to the following conditions:
  - Any such request must be made following release of examination results for the semester in which the course was taken and within one month of the official release of grades by the University.
  - The final examination script must be viewed in the presence of the course instructor or other person delegated by the head of the academic unit. Both the instructor and the student have the right to be accompanied by a registered student or a member of the faculty or staff of the University.
  - The final examination script must not be taken away or tampered with in any way.

### 4.7.5 Rereading of Final Examination Scripts

1. A student may apply to have a final examination script reread whether or not he or she has obtained a passing grade in that course.
2. A student who wishes to have a final examination script reread must make application in writing to the Office of the Registrar within one month of the official release of grades by the University. When a rereading is requested, the University will make every reasonable attempt to have the rereading conducted by a faculty member(s) other than the original marker(s). Students are advised to refer to relevant academic units for policies and procedures governing re-reads of examinations.
3. An appropriate fee per course must be paid at the time of application. For further information refer to **Fees and Charges - Reread of Final Examination Fee**. If the final numeric grade is raised after rereading, the fee is refunded. If the final numeric grade is unchanged or lowered, the fee is forfeited.

## 4.8 Grading

### 4.8.1 Letter Grades, Numeric Grades and Points Per Credit Hour

The academic standing of each student will be based upon the course(s) for which he or she was registered as of seven weeks following the first day of lectures in any semester. The final evaluation submitted to the Registrar shall consist of one of the following letter grades with the appropriate numeric grade and points awarded for each credit hour as follows:

Letter Grades	Numeric Grades	Points Per Credit Hour
A	80-100%	4
B	65-79%	3
C	55-64%	2
D	50-54%	1
F	below 50%	
PWD (pass with distinction) - indicates excellent performance	no numeric grade	not applicable
PAS (pass) - indicates performance meets expectations	no numeric grade	not applicable
FAL (fail) - indicates failing performance	no numeric grade	not applicable
DR (drop) - drop without academic prejudice	no numeric grade	not applicable
DRF (drop fail) - drop with academic prejudice	0%	
ABS (absent) - absent for acceptable cause	no numeric grade	not applicable
INC (incomplete) - incomplete pending final grade	no numeric grade	not applicable
AEG (aegrotat)	no numeric grade	not applicable

### 4.8.2 Descriptions of Letter Grades

- "A" indicates excellent performance with clear evidence of: comprehensive knowledge of the subject matter and principles treated in the course, a high degree of originality and independence of thought, a superior ability to organize and analyze ideas, and an outstanding ability to communicate.
- "B" indicates good performance with evidence of: substantial knowledge of the subject matter, a moderate degree of originality and independence of thought, a good ability to organize and analyze ideas, and an ability to communicate clearly and fluently.
- "C" indicates satisfactory performance with evidence of: an acceptable grasp of the subject matter, some ability to organize and analyze ideas, and an ability to communicate adequately.
- "D" indicates minimally acceptable performance with evidence of: rudimentary knowledge of the subject matter, some evidence that organizational and analytical skills have been developed, but with significant weaknesses in some areas, and a significant weakness in the ability to communicate.
- "F" indicates failing performance with evidence of: an inadequate knowledge of the subject matter, failure to complete required work, an inability to organize and analyze ideas, and an inability to communicate.

### 4.8.3 Good Writing

1. Students at all university levels should have reasonably sophisticated and effective communication skills and are expected to demonstrate proficiency in logical organization, clarity of expression and grammatical correctness. Good writing is expected of students in all courses. Upon graduation students should be capable of expressing complicated ideas clearly and concisely and should be able to develop arguments in a logical manner. When, in the judgement of the instructor, a student persistently fails to

display a reasonable standard of writing, the instructor may consider this when assigning a final grade.

2. Good writing is characterized by the following qualities:

- **Content**  
critical insight and freshness of thought,  
clear and penetrating ideas,  
perceptive, pure grasp of subject,  
intelligent use of primary and secondary sources, and  
a sense of completeness about the handling of the topic.
- **Organization**  
effective introduction and conclusion,  
main idea is clear and logical development follows,  
smooth transitions, and  
good use of details.
- **Style**  
appropriate, accurate, precise and idiomatic diction, and  
sentences varied in kind, length and effect.
- **Mechanics**  
consistently correct spelling,  
accurate use of punctuation,  
grammatically correct sentences, and  
well organized paragraphing.

#### 4.8.4 Linked Course

1. A linked course is a course comprising two components and is normally identified by the letter "A" or "B" as the last character of the course number. No credits or points are assigned to the "A" part of a linked course. No credits or points are given until the "B" part is completed. Credits and points will be awarded upon successful completion of the B part and will be attributed to the B part only.

#### 4.8.5 Incomplete Grades

1. A student who, for extenuating circumstances, is unable to complete the requirements of a course may, with the approval of the appropriate academic unit, be granted a letter grade of incomplete (INC) in the course. This grade shall be valid for only one week following the start of classes in the next academic semester or session as stated in the University Diary. In the event that a numeric grade has not been received by the Registrar by this deadline the INC shall be changed to the letter grade F with a numeric grade 0%.
2. Students unable to complete the requirements of a course by the end of one week following the start of classes in the next academic semester or session as stated in the University Diary, may be permitted an extension of time not exceeding the end of the semester following that in which the INC was given. Such an extension may be granted by the appropriate committee on undergraduate studies, on the recommendation of the academic unit. In special circumstances, students registered for a Social Work Internship may be given an extension not exceeding two semesters.

#### 4.8.6 Calculation of Averages

Only courses evaluated using final grades with associated numeric grades and points are included in the calculation of all averages. In calculating current averages the grades obtained in the A part of linked courses shall be included, while the grades obtained in foundation courses and work terms shall be excluded. Credit received as a result of transfer credit and challenge for credit are not included in the calculation. These calculations may be expressed as averages or grade point averages.

1. **Current average:** is a method of expressing a student's performance for the semester. The current average is based on final grades. The current average is calculated by computing the sum of the numeric grade in each course multiplied by the course weight and dividing that sum by the total of the course weights.
2. **Cumulative average:** is a method of expressing a student's performance over his or her academic career recorded since the beginning of the 1980-81 academic year. Where any given course, or an equivalent or cross-listed course, is attempted two or more times and is not repeatable, only the best attempt is included in the average. The cumulative average is calculated by computing the sum of the numeric grade in each course multiplied by the credit hour value and dividing that sum by the total number of credit hours attempted.
3. **Current grade point average:** is a method of expressing a student's performance for the semester. The points associated with each letter grade are multiplied by the course weight. The current grade point average is calculated by dividing the total number of grade points earned by the total of the course weights.
4. **Cumulative grade point average:** is a method of expressing a student's performance over his or her academic career recorded since the beginning of the 1980-81 academic year. Where any given course, or an equivalent or cross-listed course, is attempted two or more times and is not repeatable, only the best attempt is included in the average. For each course used in the calculation, the points associated with each letter grade are multiplied by the course credit hour value. The cumulative grade point average is calculated by dividing the total number of points earned by the total number of credit hours attempted.

#### 4.8.7 Aegrotat Status

1. Students in their final semester or session before graduation, who have been absent from a final examination where one has been scheduled or who have been prevented from completing the semester's or session's work, for reasons which qualify them to write a deferred examination, may, in exceptional circumstances, be given credit for the course on the recommendation of the Senate Committee on Undergraduate Studies.
2. Application for aegrotat status, with full details duly authenticated, must be made to the Registrar, indicating each course for which the application is being made, within one week after the last day of final examinations.

## 4.9 Dean's, Director's, and Principal's List

### 4.9.1 General Information

Memorial University of Newfoundland acknowledges the academic success of its students in various ways. One of these is by naming students to the appropriate dean's, director's, or principal's list. Annually, every academic unit will name to its list a maximum of 10% of its students, selected on the basis of academic performance in the nominating period.

### 4.9.2 Procedure and Criteria

- At the end of the Winter semester, academic units will nominate students to the appropriate list based on academic performance in the three preceding semesters, Spring, Fall, and Winter.
- Students on the dean's, director's, and principal's lists will be selected based on the following minimum criteria:
  - The student must have obtained a grade point average of at least 3.5 in the credit hours completed in the preceding Spring, Fall, and Winter semesters.
  - The student must have attended full-time in at least two of the three preceding semesters.
  - The student must have successfully completed at least 27 credit hours over the preceding Spring, Fall, and Winter semesters, although an academic unit may require that the 27 credit hours be completed in any two of the three preceding semesters.
  - In consideration of specific program requirements, individual academic units may include students who have successfully completed, over the three preceding semesters, a course load other than 27 credit hours, but which is consistent with the course load defined by the program.
- A notation will be placed on the student's transcript indicating that the student has been named to the dean's, director's, or principal's list.

## 4.10 Continuance and Readmission

These regulations will be applied at the end of each semester to any student who is registered in a course load of at least 9 credit hours on the last day for adding courses in a semester or session, including a student who later drops courses and changes status to that of a part-time student.

### 4.10.1 Eligibility for Continuance

#### 4.10.1.1 Academic Criteria for Continuance in the University

At the end of each semester, in order to be eligible for continuance in the University, a student is required either:

- to obtain a current average of 50% in the courses for which he or she is registered on the last day for dropping courses without academic prejudice, or
- to have obtained a cumulative average of at least 55%.

#### 4.10.1.2 Academic Criteria for Continuance in Programs of Study

- Most academic units have separate promotion or advancement criteria for continuation of students in specific programs of study. Students are advised to check the regulations of the appropriate academic unit for details. The appropriate committee on undergraduate studies may, at any time, require a student to withdraw for academic reasons.

#### 4.10.1.3 Other

- These regulations notwithstanding, the continuance of any student at this University is subject to all University regulations.

### 4.10.2 Academic Warning

- Any student who, for the first time, fails to meet the requirements outlined under **Eligibility for Continuance - Academic Criteria for Continuance in the University** will be given an academic warning.
- Certain conditions may be set for students who have been given an academic warning. Any conditions will be set by the head of the appropriate academic unit and will be administered in conjunction with the Registrar. These conditions may include, but are not limited to the following:
  - restrictions on course load,
  - enrollment in courses designed to improve academic competence,
  - involvement with programs designed to enhance success in university studies, such as those which teach time management, study, or similar skills,
  - regular meetings with a faculty advisor.

### 4.10.3 Ineligibility for Readmission

- Any student who has previously been given an academic warning and who again fails to meet the requirements, as outlined under **Eligibility for Continuance - Academic Criteria for Continuance in the University**, at this or another recognized university or college, will not be eligible for readmission to the following two semesters.
- Any student who has previously been given an academic warning and who fails, for the second time, to meet the requirements, as outlined under **Eligibility for Continuance - Academic Criteria for Continuance in the University**, at this or another recognized university or college, will not be eligible for readmission to the following three semesters. To be considered for readmission after this period, the student will need the recommendation of the head of the appropriate academic unit, or, in the case of a student with an undeclared program of study, a senior faculty advisor.
- Any student who fails, for the third time, to meet the requirements, as outlined under **Eligibility for Continuance - Academic Criteria for Continuance in the University**, at this or another recognized university or college, will be considered for readmission only on appeal following a period of withdrawal of at least six semesters. This appeal will be considered by the Senate Committee on Undergraduate Studies only on the recommendation of the head of the appropriate academic unit, or in the case of a student with an undeclared program of study, a senior faculty advisor.
- Certain conditions may be set for students who are readmitted after a period of ineligibility. These conditions are outlined under

**Academic Warning.**

5. Academic units reserve the right to deny readmission where a student has been determined to have engaged in unprofessional conduct. The code of ethics of the appropriate profession will serve as the guidelines when making this determination. However, should there not be an appropriate code of ethics, the following standard will apply: unprofessional conduct is that conduct which involves a breach of the duties required by professional ethics.
6. The University reserves the right to deny a student readmission where, in the opinion of the Senate Committee on Undergraduate Studies, following appropriate professional consultation, there is a reasonable likelihood that the student's health or behaviour could endanger the lives, health, or safety of other persons on-campus or off-campus where such a location pertains to University studies. If the University denies a student readmission, the student must be advised of the nature of the case, must be provided with an opportunity to answer the case, and must be advised of the right to appeal before the penalty imposed takes effect. For information regarding the appeal procedure refer to **Appeal of Regulations**.
7. These regulations notwithstanding, the readmission of any student at this University is subject to all University regulations.

**4.11 Academic Misconduct****4.11.1 Principles**

Within the University community there is a collective responsibility to maintain a high level of scholarly integrity. Students are expected to adhere to those principles which constitute proper academic conduct. Academic misconduct cannot be condoned or even appear to be condoned. Students have the responsibility to know which actions, as described under **Academic Offences**, could be construed as dishonest or improper. Students are reminded that for further guidance on proper scholarly behaviour they should seek advice from their instructors and faculty advisors.

**4.11.2 General Information**

1. These procedures shall apply to all academic offences relating to undergraduate studies involving, but not limited to, those students who either have been or who are enrolled at Memorial University of Newfoundland. Notification of an allegation of academic misconduct will be forwarded to the last known mailing address of the student as noted on the files at the Office of the Registrar. The University reserves the right to implement action under these procedures where an allegation has been made against a student but where reasonable efforts to contact the student are unsuccessful.
2. A student who wishes to attend classes, laboratories or other educational activities while an investigation under these procedures is being carried out, can do so only with the written permission of the academic unit concerned. This provision excludes students charged with an offence under the *Code of Disciplinary Procedures for Students*. For information regarding the *Code of Disciplinary Procedures for Students* contact the Office of Student Affairs and Services.
3. While a student can continue in a program of studies, if eligible, while an investigation under these procedures is being carried out, the University does not accept liability for any consequences to the student's progress. However, the University may take these consequences into account, as appropriate and to the extent feasible, in cases where charges are dropped or the student is not found guilty. The consequences arising from an investigation and any negative decision rendered may include retroactive effect on grades or promotion within a program.

**4.11.3 General Procedure**

1. When a member of the University community (faculty, staff, student) has grounds for belief that an academic offence has been committed, that person shall report the matter without delay to the head of the appropriate academic or administrative unit. There should then be an attempt between the parties concerned to resolve minor offences. Only if resolution proves impossible, or one party is dissatisfied with the resolution, should the head of the academic or administrative unit become further involved.
2. If, in the judgment of the head of the academic or administrative unit, the offence warrants resolution through informal procedures, the individuals involved will be advised to attempt to resolve the matter through **Procedures for Informal Resolution of Alleged Academic Offences**. In the event that no resolution is possible through informal procedures between the individual parties, the head of the academic or administrative unit will institute formal proceedings.
3. If, in the judgement of the head of the academic or administrative unit, the alleged offence against University regulations is such as to warrant resolution through formal procedures, the head of the academic or administrative unit will refer the matter to the chair of the appropriate committee on undergraduate studies, and **Procedures for Formal Resolution of Alleged Academic Offences** will be implemented.
4. In all cases, it is the responsibility of the academic or administrative unit to ensure that fairness and impartiality are achieved in the treatment of students.

**4.11.4 Academic Offences**

1. In the following section the plural shall be deemed to include the singular.
2. Academic offences shall be deemed to include, but shall not be limited to, the following:
  - Cheating on examinations or any other tests, theses, assignments, work term reports, projects or internship reports: includes copying from another student's work or allowing another student to copy from one's own work; consulting with any unauthorized person during an examination or test; using unauthorized aids; or knowingly recording or reporting false empirical or statistical data. The work referred to includes examinations, theses, assignments, work term reports, projects, internship reports, or any other tests which are to be used in judging the student's performance in a course or program of study, or on any special tests which the University may offer.
  - Impersonating another student or allowing oneself to be impersonated: includes the imitation of a student or the entrance into an arrangement with another person to be impersonated for the purposes of taking examinations or tests or carrying out laboratory or other assignments.
  - Plagiarism: is the act of presenting the ideas or works of another as one's own. This applies to all material such as essays, laboratory reports, work term reports, design projects, seminar presentations, statistical data, computer programs and research results. The properly acknowledged use of sources is an accepted and important part of scholarship. Use of such material without acknowledgment is contrary to accepted norms of academic behaviour. Information regarding acceptable writing practices is available through the Writing Centre.
  - Theft of examination papers or other material: includes obtaining by any improper means examination papers, tests, or any other such material.

- Use and/or distribution of stolen material: includes the use of material which the student knows to have been improperly obtained and/or the distribution of such material.
- Submitting false information: includes falsifying academic forms or records, submitting false credentials, medical or other certificates, or making a false, misleading or incomplete declaration to the University.
- Submitting work for one course or work term which has been or is being submitted for another course or work term at this or any other institution without express permission to do so :includes the presentation of an essay, report or assignment to satisfy some or all of the requirements of a course when that essay, report, or assignment has been previously submitted or is concurrently being submitted for another course without the express permission of the professor(s) involved.

#### 4.11.5 Procedures for Informal Resolution of Alleged Academic Offences

##### 4.11.5.1 General Information

These procedures will not be applied to cases involving alleged offences on final examinations. Alleged offences on final examinations are governed by the **Procedures for Formal Resolution of Alleged Academic Offences**.

##### 4.11.5.2 Explanation of Procedures

If, upon receiving a report of an alleged academic offence, the head of the academic or administrative unit decides that an attempt should be made to resolve the matter informally the following procedures shall apply:

- The head of the appropriate academic or administrative unit shall request a meeting with the accuser and the accused and at the meeting the head shall state the allegation, review the **Procedures for Informal Resolution of Alleged Academic Offences** including the range of applicable penalties, and arrange a second meeting between the accuser and the accused only.
- At the second meeting the accuser and accused shall endeavor to obtain a mutually satisfactory resolution of the matter.
- The accuser and accused shall report jointly to the head of the academic or administrative unit on the result of their second meeting.
- If the report is of a resolution which the head of the academic or administrative unit considers to be fair and equitable the matter shall be considered closed. If the head of the academic or administrative unit considers the reported resolution to be unfair and/or inequitable he or she will endeavor to obtain an alternative satisfactory resolution directly with the parties.
- Should all reasonable efforts to obtain an informal resolution fail, the head of the academic or administrative unit will refer the case to the chair of the appropriate committee on undergraduate studies and shall inform the accuser and the accused accordingly. From this stage onward **Procedures for Formal Resolution of Alleged Academic Offences** will apply.
- A student may request, during the **Procedures for Informal Resolution of Alleged Academic Offences**, that his or her case be referred to the chair of the appropriate committee on undergraduate studies, and thereafter the **Procedures for Formal Resolution of Alleged Academic Offences** will apply.

##### 4.11.5.3 Failure to Appear or Respond

- If at any stage of the **Procedures for Informal Resolution of Alleged Academic Offences**, the accused fails to appear or to respond to a charge, without reasonable cause, within two weeks of notification of an allegation, action may be taken on the charge in the absence of the accused.
- If at any stage of the **Procedures for Informal Resolution of Alleged Academic Offences**, the accuser fails to appear at a scheduled hearing to defend an allegation, without reasonable cause, within two weeks of notification by the head of the academic or administrative unit, the action will be dismissed.

##### 4.11.5.4 Penalties in the Case of Informal Resolution

A student who has been found guilty of an academic offence will be subject to a penalty or penalties commensurate with the offence. Some cases may warrant more than one penalty for the same offence, and previous academic misconduct will be taken into account in determining penalties. The range of penalties and their determination are:

- Reprimand: will be in the nature of a warning by the head of the academic or administrative unit or the appropriate committee to the student that the student's behaviour has been unacceptable to the University.
- Reduction of grade: will apply to an examination, test, or assignment to which an offence is relevant, and will be decided by the head of the academic or administrative unit.

#### 4.11.6 Procedures for Formal Resolution of Alleged Academic Offences

##### 4.11.6.1 General Information

If the matter cannot be resolved following the **Procedures for Informal Resolution of Alleged Academic Offences**, or if, in the opinion of the head of the appropriate academic or administrative unit, the allegation involves a major breach of University regulations, or in the case of alleged offences on final examinations, the following **Procedures for Formal Resolution of Alleged Academic Offences** shall apply.

##### 4.11.6.2 Explanation of Procedures

- If the head of the academic or administrative unit (in the case of departmentalized faculties, the head in consultation with the dean) is satisfied that the student has a serious allegation to answer, that person shall inform the student in writing of the nature of the allegation against him or her. In addition, the head of the academic or administrative unit shall report to the chair of the appropriate faculty committee on undergraduate studies who will interview separately the accuser, the accused and relevant witnesses. At these interviews the chair of the appropriate committee on undergraduate studies, the accuser, the accused and relevant witnesses all have the right to be accompanied by a registered student or a member of the faculty or staff of the University. The Memorial University of Newfoundland Student Union (MUNSU) and the Sir Wilfred Grenfell College Council of the Students' Union (SWGCSU) will provide students with information on their legal rights.
- Upon completion of these interviews, the faculty chair shall submit a written report of all findings to the Secretary, Senate Committee on Undergraduate Studies, c/o Office of the Registrar.
- The Secretary of the Senate Committee on Undergraduate Studies shall present this report to both the accuser and accused for perusal and comment. Once in receipt of this report, the accuser and accused shall have two weeks in which to submit to the Secretary, Senate Committee on Undergraduate Studies any additional comments on the report that the person wishes to be considered in the deliberations of the Senate Committee on Undergraduate Studies.

- The Secretary of the Senate Committee on Undergraduate Studies shall present to the Senate Committee on Undergraduate Studies for decision all information received from the chair of the appropriate Committee on Undergraduate Studies as well as comments from the accuser and accused. The chair who submitted the written report shall remain at the meeting held to consider the case to answer questions raised by the Senate Committee on Undergraduate Studies and to provide information pertinent to the case, but shall be absent from the voting process.
- The Senate Committee on Undergraduate Studies shall take appropriate action in accordance with **Penalties in the Case of Formal Resolution**.

#### 4.11.6.3 Failure to Appear or Respond

- If at any stage of the **Procedures for Formal Resolution of Alleged Academic Offences**, the accused fails to appear or to respond to a charge, without reasonable cause, within two weeks of notification of an allegation, action may be taken on the charge in the absence of the accused.
- If at any stage of the **Procedures for Formal Resolution of Alleged Academic Offences**, the accuser fails to appear at a scheduled hearing to defend an allegation, without reasonable cause, within two weeks of notification by the head of the academic or administrative unit, the action will be dismissed.

#### 4.11.6.4 Penalties in the Case of Formal Resolution

A student who has been found guilty of an academic offence will be subject to a penalty or penalties commensurate with the offence. Some cases may warrant more than one penalty for the same offence, and previous academic misconduct will be taken into account in determining penalties. Enforcement of penalties resulting from **Procedures for Formal Resolution of Alleged Academic Offences** will be overseen by the Registrar. The range of penalties and their determination is:

- Reprimand: shall be in the nature of a warning by the head of the academic or administrative unit or the appropriate committee to the student that the student's behaviour has been unacceptable to the University.
- Reduction of grade: will apply to an examination, test, or assignment to which an offence is relevant, and will be decided by the Senate Committee on Undergraduate Studies upon the recommendation of the appropriate academic or administrative unit.
- Probation: the period of probation will be determined by the Senate Committee on Undergraduate Studies. The impact of being placed on probation is that the commission of any further academic offence during the period of probation may lead to suspension or expulsion.
- Suspension: will apply to a course, department, faculty, school, or the University. The period of suspension will be determined by the Senate Committee on Undergraduate Studies and shall not exceed six consecutive semesters.
- Expulsion: the recommendation for expulsion from the University will be made by the Senate Committee on Undergraduate Studies to the President of the University for a final decision. Prior to the President's decision, the Senate Committee on Undergraduate Studies will notify the accused, in writing, of the recommendation for expulsion from the University. The accused will be allowed a period of two weeks following the date of release of such notification to lodge an appeal before the President's final decision concerning expulsion from the University. Any such appeal should be made in writing to the Executive Committee of Senate, c/o the Office of the Registrar.

#### 4.11.7 Transcript Entries Related to Penalties

1. Transcript entries shall relate to the penalty(ies) imposed as follows:

Penalty	Transcript Entry
Reprimand	No transcript entry
Reduction of Grade	Entry of final grade for course
Probation	"On probation at the University for academic misconduct until [Day, Month, Year]"
Suspension	"Suspended from the University/Faculty/School/Program/Course for academic misconduct until [Day, Month, Year]"
Expulsion	"Expelled from the University for academic misconduct effective [Day, Month, Year]"

2. The transcript entries for "probation" or "suspension" will be removed entirely upon the expiration of the penalty.

#### 4.11.8 Disposition of Documentation

1. The disposition of documents relating to allegations under these procedures shall be as follows:
  - In cases where the allegation was decided either "not proven" or "unfounded" none of the documentation shall be retained.
  - In the case of a resolution effected through the **Procedures for Informal Resolution of Alleged Academic Offences**, all documentation shall be retained in the office of the head of the academic or administrative unit.
  - In the case of a resolution effected through the **Procedures for Formal Resolution of Alleged Academic Offences**, all documentation shall be forwarded to and retained in the Office of the Registrar.

### 4.12 Graduation

#### 4.12.1 Application for Graduation - Degrees, Diplomas and Certificates

Students in their graduating year must apply to the Registrar to be admitted to a degree or to be awarded a diploma or certificate. Application must be made on the prescribed form which is available from the Office of the Registrar. The deadlines for application are listed in the University Diary for the Spring and Fall convocations.

1. No student can be awarded a degree, diploma or certificate unless and until an average of at least 2 points has been obtained on the total number of credit hours required for such degree, diploma or certificate. The degree of Doctor of Medicine is not included in this requirement since all courses comprising the degree are graded on a PAS or FAL basis.
2. It is the duty of the Registrar to certify to the Senate, where appropriate, that students for degrees, diplomas and certificates have met all the regulations and requirements of the University.

### 4.12.2 Classification of General Degrees

- General degrees are awarded as "Classified", "Unclassified" or are not classified, in compliance with such regulations as may be required by the academic unit(s) offering the program(s). Refer to the degree regulations of the academic units for further information.
- General degrees are awarded in three classes based on the system for granting points set forth in **Grading - Letter Grades, Numeric Grades and Points per Credit Hour**, and determined as follows:
  - A student who obtains an average of 3.5 points or better on the total number of credit hours required for the degree shall be awarded the degree with First-Class Standing and provided that all other degree requirements are met.
  - A student who fails to obtain First-Class Standing but who obtains an average of 2.75 points or better on the total number of credit hours required for the degree shall be awarded the degree with Second-Class Standing provided that all other degree requirements are met.
  - All other students will be awarded the degree with Third-Class Standing, provided that they obtain an average of 2 points or better on the total number of credit hours required for the degree and provided that all other degree requirements are met.
- When a student obtains credit for more credit hours than are required for the degree, his or her total degree points shall include only those received for the credit hours required. In eliminating from the total points those received for credit hours beyond the requirements of the degree, the credit hour(s) for which the student receives the fewest points shall be disregarded, provided that no credit hour is disregarded that is a requisite for the degree.
- Where a student receives more than one classified bachelor's degree, the class of each degree will be determined independently by applying the scheme set forth in **Classification of General Degrees** and provided that in determining the points total for each degree only those credit hours may be counted which are applicable towards the degree concerned.
- A student who has been granted credit for courses completed at Memorial University of Newfoundland before the introduction of the point system, and/or one who has been given credit for courses completed at another university, will have the class of his or her degree determined by applying the scheme set forth in **Classification of General Degrees** in proportion to the total of required credit hours completed at Memorial University of Newfoundland since the introduction of the point system.
- An Unclassified degree will be awarded a student who has completed at Memorial University of Newfoundland, fewer than one-half of the credit hours required for the degree, or fewer than one-half of the required credit hours since the introduction of the point system. All students shall, however, obtain an average of 2 points or better on the total number of the credit hours required for the degree taken at this University since the introduction of the point system.
- The following degrees are not classified: Bachelor of Education (Intermediate/Secondary), Bachelor of Engineering, Bachelor of Maritime Studies, Bachelor of Music Education, Bachelor of Post-Secondary Education (as a second degree), Bachelor of Special Education, Bachelor of Technology, Doctor of Medicine, and all degrees offered by the School of Human Kinetics and Recreation.

### 4.12.3 Classification of Honours Degrees

- Honours degrees may be classified or not classified in compliance with such regulations as may be required by the academic unit offering the program. Refer to the appropriate degree regulations of the academic units for further information.
- A student who has been granted credit for courses completed at Memorial University of Newfoundland before the introduction of the point system, and/or one who has been given credit for courses completed at another university, will have the class of his or her honours degree determined in proportion to the total number of required credit hours completed at Memorial University of Newfoundland since the introduction of the point system.
- An honours degree awarded a student who has completed at Memorial University of Newfoundland, fewer than one half of the credit hours required for the degree, or fewer than one half of the required credit hours since the introduction of the point system, may be Unclassified or not classified.

### 4.12.4 Diplomas and Certificates

- Diplomas and certificates are not classified.

## 4.13 Waiver of Regulations

- All undergraduate regulations notwithstanding, the University reserves the right, in special circumstances, to modify, alter or waive any regulation in its application to individual students where, in the judgement of the head of the appropriate academic unit or committee, merit and equity so warrant. Requests for waivers should be directed as follows:
  - Course Prerequisites or Co-requisites: the head of the academic unit of the course(s) in question.
  - Departmental Regulations: the appropriate committee on undergraduate studies upon the recommendation of the head of the appropriate department.
  - Faculty or School Regulations: the appropriate committee on undergraduate studies. Such waivers shall not reduce the total number of credit hours required for a minor, major, certificate, diploma, or degree program.
  - General Academic Regulations (Undergraduate): the Senate Committee on Undergraduate Studies on the recommendation of the appropriate committee on undergraduate studies. Such waivers shall not reduce the total number of credit hours required for a minor, major, certificate, diploma, or degree program.
  - Scholarships, Bursaries, Awards, Medals and Prizes Regulations: the Senate Committee on Undergraduate Scholarships and Financial Aid on the recommendation or request of the head of the appropriate academic unit.
- Any student whose request for waiver of regulations has been denied has the right to appeal. For information regarding the appeal procedure refer to **Appeal of Regulations - Appeal Procedures**.

## 4.14 Appeal of Regulations

### 4.14.1 General Information

- Every student has the right to appeal decisions resulting from the application of University regulations.
- Appeals will be considered in the case of illness, bereavement or other acceptable cause, duly authenticated.
- For assistance in the appeals process, students are advised to consult with the Office of the Registrar.
- In preparing an appeal a student may consult advisors or facilitators. Such advisors or facilitators may include a faculty advisor, a



counselor, a representative from the Memorial University of Newfoundland Student Union (MUNSU) or faculty who have made themselves familiar with the appeals process and who are willing to undertake the role of student advisor or facilitator.

5. Appeals are made before specific committees that exist at the University to provide an objective review of cases. The appeals process is designed to assist students at critical points in their university career, not to intimidate them. Refer also to **Appeal Procedures** for information concerning where appeals should be directed.
6. While the University makes provision for students to appeal regulations, the academic, financial or other consequences of the appeals process rests with the students.
7. A student whose appeal is denied will be advised in the letter of denial of the next avenue of appeal that may be taken. Should a student's appeal be denied by the Senate, the student will be advised that within the University no further appeal is possible.

#### 4.14.2 Appeal Procedures

1. The responsibility for making an appeal before the appropriate committee of the University rests with the student.
2. A student who is ineligible to officially register for courses but who wishes to attend classes, laboratories or other educational activities while an appeal is in progress can do so only with the written permission of the academic unit concerned. This provision excludes students charged with an offence under the *Code of Disciplinary Procedures for Students*. For information regarding the *Code of Disciplinary Procedures for Students* contact the Office of Student Affairs and Services.
3. Any student whose request for waiver of regulations has been denied has the right to appeal. Any such appeal should be made in writing clearly stating the basis for the appeal and should be directed as follows:
  - Course prerequisites or co-requisites: to the appropriate committee on undergraduate studies.
  - Departmental Regulations: to the appropriate committee on undergraduate studies where the department refuses to recommend the waiver, or to the Senate Committee on Undergraduate Studies, c/o The Office of the Registrar, where the committee on undergraduate studies denies the request for waiver.
  - Faculty and School Regulations: to the Senate Committee on Undergraduate Studies, c/o The Office of the Registrar.
  - General Academic Regulations (Undergraduate): to the Executive Committee of Senate, c/o The Office of the Registrar.
  - Scholarships, Bursaries, Awards, Medals and Prizes Regulations: to the Executive Committee of Senate, c/o The Office of the Registrar.

#### 4.14.3 Information Required in Letters of Appeal

1. All appeals must be made in writing clearly stating the basis for the appeal and must be directed to the appropriate University committee.
2. Reasons for initiating an appeal, including medical problems, bereavement and/or other acceptable cause, must be stated in the letter of appeal.
3. Students must present independent evidence to corroborate statements made in the letter of appeal. Preferably, this evidence will come from a professional, such as a physician, a counselor, or a professor. However letters from other knowledgeable parties may be acceptable.
4. In cases where an appeal is made on medical grounds, medical notes must be sufficiently specific to allow appropriate consideration of the student's case. The note must also clearly state that, in the opinion of the physician, the problem was serious enough to have interfered with the student's work. Students should refer to the policy respecting **Information Required for Medical Certificates** for more complete information.
5. Students claiming bereavement as grounds must provide proof of death and evidence of a close personal relationship between themselves and the deceased.
6. **Confidentiality:** The committees to which appeals are made do require substantial information about the reasons for the appeal in order to make their decisions. However, the committees also recognize the student's rights to confidentiality. With this in mind, a student may discuss the reasons for his or her appeal with a University or College counselor, who, with the student's permission and provided sufficient reasons exist, may then write a letter to the appropriate committee confirming that there were sufficient grounds for an appeal without disclosing the special personal and confidential details of the case.

#### 4.14.4 Information Required for Medical Certificates

1. Students who request permission to drop courses, to withdraw from University studies, to have examinations deferred or to obtain other waivers of University, departmental or course regulations based on medical grounds are required by the University to produce a note from a physician in support of their request. Such notes must be sufficiently specific to allow a proper consideration of the student's case. The University requires that all medical notes must be on letterhead, must be signed by the physician, must confirm the specific dates on which the student visited the physician and should include details on the following:
  - the degree to which the illness (or treatment, in the case of medication, for example) is likely to have affected the student's ability to study, attend classes, or sit examinations.
  - the length of time over which the student's abilities were likely hampered by the medical condition (e.g., recurring and severe back pain over a two-month period would likely have a more adverse effect on studies than a single episode of back pain requiring bed rest for a week).
  - the fitness of the student to resume studies (it is in the student's best interest not to return to studies prematurely).
2. **Confidentiality:** The University respects the confidentiality of all material contained in medical notes. Physicians are strongly advised to retain a copy of the medical note in case the medical note needs to be verified or reissued at a later date.

## 5 Non-Academic Regulations

### 5.1 Discipline

The President may use all means deemed necessary for maintaining discipline. Students found guilty of misbehaviour may be suspended or fined on the authority of the President, or expelled from the University by the President on the authority of the Board of Regents. (See the *Discipline Code*.)

#### 5.1.1 Traffic and Parking Regulations On Campus

Students, employees, service personnel, and other persons having a direct association with the University, Health Sciences Centre, or

the Fisheries and Marine Institute wishing to park a vehicle in a designated area on campus must obtain a parking permit. Traffic and parking regulations on campus are enforced by Campus Enforcement and Patrol assisted by the Royal Newfoundland Constabulary.

Application forms for vehicle parking permits, copies of the Traffic and Parking Rules and Regulations, and other information pertaining to traffic and parking on campus, are available at the Campus Enforcement and Patrol Office, Facilities Management Building, or the Health Sciences Centre, Room H2302, or the Fisheries and Marine Institute, Room 2062.

Archived Previous Calendar  
Current University Calendar available at  
[mun.ca/university-calendar](http://mun.ca/university-calendar)

Archived Previous Calendar  
Current University Calendar available at  
[mun.ca/university-calendar](http://mun.ca/university-calendar)

# FISHERIES AND MARINE INSTITUTE

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## Fisheries and Marine Institute Advisory Committee

An Industry-based Advisory Committee, established by an Act of Legislature, with members appointed by the Board of Regents of the University, advises the Fisheries and Marine Institute on fisheries and marine related programs and activities.

**Executive Director, Fisheries and Marine Institute**  
Mr. Glenn Blackwood

**President, Avalon Marine Inc**  
Mr. P. Clark

**Vice-President, C.A. Crosbie Shipping Ltd**  
Mr. G. Davis

**Asset Manager, Terra Nova**  
Mr. William Fleming

**Regional Director General, Fisheries and Ocean**  
Mr. W. Follett

**President, Canship Limited**  
Captain Sidney Hynes

**Vice-President, Grand Atlantic Seafoods Inc**  
Ms. I. Petten

**Staff Representative, Fish, Food and Allied Workers Union (FFAW)**  
Mr. G. Pretty

**President, B.A. Roberts and Associates**  
Mr. B. Roberts

**Deputy Minister, Department of Fisheries and Aquaculture**  
Mr. M. Samson

**Owner/Operator, AMP Fisheries Ltd**  
Mr. R. Simmonds

**President, Student Union, Fisheries and Marine Institute**  
Mr. Chris Fulford

## Fisheries and Marine Institute Executive Committee

**Executive Director**  
Blackwood, G., B.Sc.(Hons.), M.A. *Memorial*

**Head, School of Fisheries**  
Bonnell, D., B.Sc. *Memorial*

**Head, School of Maritime Studies**  
Dutton, C. R., B.Eng., B.Voc.Ed., M.Eng. *Memorial*, P.Eng.

**Director, Corporate Services and External Affairs**  
Vacant

**Head, Division of Degree Studies and Research**  
Fisher, P., B.Sc., P.G.C.E., Ac. Dip. Ed. *London*, M.Ed. *Memorial*, Ph.D. *Leeds*

## Administrative Personnel

### Division of Corporate Services and External Affairs

**Director**  
Vacant

**Institute Registrar**  
Ryan-Kavanagh, G., B.Ed.(Post-Secondary) *Memorial*

**Manager, Cafeteria**  
Garnier, M., B.Sc. *St.F.X.*

**Manager, Finance and Contracts**  
Christian-Quinton, F., B.Comm. *Memorial*

**Manager, Human Resources**  
Fowler, M., B.Comm. *Memorial*

**Manager, Marine and Technical Services**  
Sheehan, B.

**Manager, Marketing and Business Development**  
Anderson, G.L., B.A. *Memorial*

**Captain, Training and Research Vessel**  
Manning, H., Master of Ships Under 500 Tons

### Division of Degree Studies and Research

**Head**  
Fisher, P., B.Sc., P.G.C.E., Ac. Dip. Ed. *London*, M.Ed. *Memorial*, Ph.D. *Leeds*

**Coordinator of Advanced Programs**  
Smith, N., B.Comm. *Memorial*

**Institute Librarian**  
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### Guidance and Student Affairs

**Guidance/Student Affairs Officer**  
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**Student Liaison Officer**  
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**Director, Centre for Aquaculture and Seafood Development**  
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**Director, Centre for Sustainable Aquatic Resources**  
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**Departmental Project Coordinator**  
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### School of Maritime Studies

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**Director, Centre for Marine Simulation**  
Patterson, A., Dip.N.Sci. *Canadian Coastguard College*, B.M.S. *Memorial*, Master Mariner

**Director, Offshore Safety and Survival Centre**  
Rutherford, R., H.N.D., B.M.S. *Memorial*, Marine Engineer (1st Class), P.Eng., M.I.Mar.E., C.I.Mar.E.

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Intermediate Voyage

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Mueller, U., Master Mariner

Noseworthy, D.

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Short, C., Master Mariner

Small, G., B.Sc., B.Ed. *Memorial*Snow, R., N.F.P.A., Level 3 Firefighting Cert., *University of Oklahoma*St. Croix, J., B.A., B.Ed., M.Ed., M.A. *Memorial*Stone, B., B.Eng., M.Eng., M.B.A. *Memorial*, P.Eng.Ward, E., Dip.Voc.Ed. *Memorial*Wareham, M., Dip. Tech. *Marine Institute*, B.Eng. *Memorial*Way, B., B.Eng., M.B.A., M.Ed. *Memorial*, P.Eng.White, A., Dip.Tech. *College of Fisheries*, Marine Engineer (1st Class Motor, 4th Class Steam)Whitelaw, B., B.Sc. *Newcastle*

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Woolridge, B.

Woolridge, D., B.Sc., B.Ed., M.Ed. *Memorial*

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Zaki, A., Dip.Tech. *College of Fisheries*, Master Mariner

## 1 School Description

The Fisheries and Marine Institute was established in 1964 as the College of Fisheries, Navigation, Marine Engineering and Electronics. It became affiliated with the University in 1992 and since then has continued to grow as a world-class centre of marine technology and education. The official name is the Fisheries and Marine Institute of Memorial University of Newfoundland, but it is commonly known as the Marine Institute.

The main campus of the Marine Institute overlooks the city of St. John's from within Pippy Park, which has extensive hiking trails and recreational facilities. This building houses a flume tank, a seafood processing plant, freshwater aquaculture research and development facilities, and extensive marine simulation facilities. The Dr. C. R. Barrett Library, located at this campus, houses one of Canada's largest marine-related collections. In addition, the Institute manages the Offshore Safety and Survival Centre in Foxtrap and Stephenville and a marine base on the south side of St. John's harbour.

The Marine Institute provides a full range of programs focusing on fisheries and marine science and technology. In addition to undergraduate and graduate degrees, the Institute offers advanced diplomas, diplomas of technology, and technical and vocational certificates. The Institute also runs a variety of short courses and industrial response programs. Many courses, including most courses in degree programs, are available through the Marine Institute Learning Services (MILES) website, [www.mi.mun.ca/miles](http://www.mi.mun.ca/miles).

All programs and courses are designed to provide students with the knowledge and skills required for success in the workforce. The Institute seeks the advice of industrial program advisory committees in the ongoing development and review of programs. Whenever appropriate, it submits programs for national accreditation, providing graduates with mobility in professional employment.

## 2 Description of Degree Programs

Students must meet all regulations of the Fisheries and Marine Institute in addition to those stated in the University's general regulations. For information concerning fees and charges, admission/readmission to the University, and general academic regulations (undergraduate), refer to **UNIVERSITY REGULATIONS**.

For information about non-degree programs and upgrading opportunities, refer to the Marine Institute's website [www.mi.mun.ca](http://www.mi.mun.ca).

### 2.1 General Degrees

The Marine Institute offers two undergraduate degrees. For specific details on each degree refer to the appropriate **Degree Program Regulations**. The courses in the programs are available on campus and by distance delivery.

#### 2.1.1 Bachelor of Maritime Studies

The Bachelor of Maritime Studies program prepares graduates for career advancement in the maritime and related industries. It is designed for students who have graduated from accredited, or Transport Canada approved, diploma of technology programs in the marine fields. The program is also available to professional mariners and certain Canadian Forces (Naval Operations) personnel. Courses in the program provide the student with an introduction to human resource and business management concepts, and the social contexts in which their careers will be based. The program consists of 39 credit hours in addition to work completed in a diploma program and can be taken on a full-time or part-time basis.

#### 2.1.2 Bachelor of Technology

The Bachelor of Technology program prepares graduates for career advancement in health science technology or engineering/applied science technology industries. It is designed for students who have graduated from an accredited diploma of technology program that is applicable to one of two optional areas. Courses in the program provide the student with an introduction to human resource and business management concepts, and the social contexts in which their careers will be based. The program consists of 39 credit hours in addition to work completed in a diploma program and can be taken on a full-time or part-time basis.

The optional areas are:

- Engineering and Applied Science Technology Option, which is normally chosen by students who have an engineering/applied science technology diploma.
- Health Sciences Technology Option, which is normally chosen by students who have a health sciences technology diploma.

## 3 Admission/Readmission Regulations for Degree Programs

In addition to meeting the admission/readmission requirements for the University students must also meet the admission/readmission requirements for the Marine Institute. See **UNIVERSITY REGULATIONS Admission/Readmission to the University (Undergraduate)** for University requirements.

### 3.1 General Information

1. All application forms must be submitted to the Admissions Office, Office of the Registrar, Memorial University of Newfoundland, St. John's, NL, A1C 5S7.
2. Students who want to take University courses concurrently with diploma courses should check either Pre-Bachelor of Maritime Studies or Pre-Bachelor of Technology on the Memorial University of Newfoundland application for admission/readmission form.

### 3.2 Admission Requirements for Applicants to the Bachelor of Maritime Studies Program

1. An applicant must submit a form for admission/readmission to the Bachelor of Maritime Studies program along with the form for admission/readmission to the University. This application must include all required documentation including proof of the diploma or certificate required for admission in a specific category.

#### 2. Categories for admission to the Bachelor of Maritime Studies

Applicants must meet the general admission/readmission requirements of the University and be eligible for admission to the Bachelor of Maritime Studies program in one of the following categories:

- Category A: applicants holding a diploma from the Marine Institute in nautical science, marine engineering technology, naval architecture technology or marine engineering systems design technology or marine engineering technology,
  - Category B: applicants holding a Canadian Technology Accreditation Board accredited, or Transport Canada approved, diploma in marine engineering technology or nautical science,
  - Category C: applicants holding a Canadian or non-Canadian diploma similar to an accredited or Transport Canada approved Marine Institute diploma in nautical science, marine engineering technology, naval architecture technology or marine engineering systems design technology,
  - Category D: applicants holding a Transport Canada Certificate of Competency at the Master Mariner or Engineering First Class level or equivalent,
  - Category E: applicants holding a Transport Canada Certificate of Competency at the Master, Intermediate Voyage level or equivalent,
  - Category F: applicants holding a Transport Canada Certificate of Competency at the Engineering Second Class level or equivalent,
  - Category G: applicants who have Canadian Forces (Naval Operations) training of a type and at a level acceptable to the Admissions Committee.
3. Applications to the program will be considered by the appropriate admissions committee(s).

### 3.3 Admission Requirements for Applicants to the Bachelor of Technology Program

1. An applicant must submit a form for admission/readmission to the Bachelor of Technology program along with the form for admission/readmission to the University. This application must include all required documentation including proof of the diploma or certificate required for admission in a specific category.
2. **Categories for admission to the Bachelor of Technology Program**  
Applicants must meet the regular admission requirements of the University and be eligible for admission in one of the following categories:
  - Category A: applicants holding a diploma of technology accredited by the Canadian Medical Association (CMA),
  - Category B: applicants holding a diploma of technology in engineering/applied science technology accredited by the Canadian Technology Accreditation Board (CTAB),
  - Category C: applicants holding a diploma of technology comparable to a Marine Institute or College of the North Atlantic three-year CTAB accredited diploma in engineering/applied science technology,
  - Category D: applicants holding a diploma of technology comparable to a College of the North Atlantic three-year CMA accredited diploma.
3. Upon acceptance into the program, students will be admitted to one of the two options: the Engineering and Applied Science Technology Option or the Health Sciences Technology Option. Students may be permitted to change their option with the approval of the Marine Institute Committee on Undergraduate Studies.
4. Applications to the program will be considered by the appropriate admissions committee(s).

## 4 Degree Program Regulations

### 4.1 Bachelor of Maritime Studies

- Students must complete 39 credit hours in addition to the work which was required under their category of admission.
- The required and elective courses are listed in **Table 1 Bachelor of Maritime Studies - Course Requirements For All Students**. These courses may have prerequisites which have to be met.
- Students admitted to the program in certain categories may have to complete additional requirements. These are listed in **Table 2 Bachelor of Maritime Studies - Additional Requirements Based on Category of Admission**.
- When transfer credit has been granted for a course(s) taken to satisfy the requirements for admission students must take an additional elective University course(s).
- To meet the academic requirements for a Bachelor of Maritime Studies a candidate shall successfully complete the following program with a minimum overall average of 60% and a minimum numeric grade of 50% in each course required for the degree.
- Students must take 39 credit hours with 21 credit hours from the required courses and 18 credit hours from the electives.
- At least one elective must be chosen from each of the groups A and B.

**Table 1 Bachelor of Maritime Studies - Course Requirements for All Students**

Required Courses	Group A Electives	Group B Electives
Business 1000	Business 1201	Economics 2010
Business 2301	Business 2102	Economics 2020
English - 3 credit hours at the 1000 level	Business 3320	Economics 3030
MSTM 4001	Business 4000	Economics 3360
MSTM 4004	Business 4320	Geography 3510
MSTM 4060	Business 5301	Geography 4410
MSTM 4100	Business 6320	MSTM 4030
MSTM 4200	Business 7302	Political Science 3210
	MSTM 4002	Political Science 4200
	MSTM 4003	Sociology 2120
	MSTM 4005	Sociology 3120
	MSTM 4020	Sociology/Anthropology 3317
	MSTM 4040	Sociology/Anthropology 4091
	MSTM 4050	
	Statistics 2500	



**Table 2 Bachelor of Maritime Studies - Additional Requirements Based on Category of Admission**

Category of Admission	Additional Requirements
A: Students holding a diploma from the Marine Institute in nautical science, marine engineering technology, naval architecture technology or marine engineering systems design technology.	No additional requirements.
B: Students holding a Canadian Technology Accreditation Board accredited, or Transport Canada approved, diploma in marine engineering technology or nautical science.	No additional requirements, with the possible exception of course prerequisites.
C: Students holding a Canadian or non-Canadian diploma similar to an accredited or Transport Canada approved Marine Institute diploma in nautical science, marine engineering technology, naval architecture technology or marine engineering systems design technology.	May have to complete additional requirements.
D: Students holding a Transport Canada Certificate of Competency at the Master Mariner or Engineering First Class level or equivalent.	No additional requirements, with the possible exception of course prerequisites.
E: Students holding a Transport Canada Certificate of Competency at the Master, Intermediate Voyage level or equivalent.	Either: <ul style="list-style-type: none"> <li>• Transport Canada - Ship management 093 (Master Mariner) or</li> <li>• Both of: Marine Institute Business and Organizational Management 3114 and Marine Institute Business and Organizational Management 3204. The prerequisite(s) for Business and Organizational Management 3204 will be waived.</li> </ul>
F: Students holding a Transport Canada Certificate of Competency at the Engineering Second Class level or equivalent.	Transport Canada - Applied Mechanics (1st Class) Transport Canada - Thermodynamics (1st Class) Transport Canada - Electrotechnology (1st Class)
G: Students who have Canadian Forces (Naval Operations) training of a type and at a level acceptable to the Admissions Committee.	May have to complete additional requirements.

## 4.2 Bachelor of Technology

Students must complete 39 credit hours in addition to the work which was required under their category of admission.

The required and elective courses are listed in **Table 3 Bachelor of Technology - Engineering and Applied Science Technology Option** and **Table 4 Bachelor of Technology - Health Science Technology Option**. These courses may have prerequisites which have to be met. MSTM 4030, 4040, and 4050 may be taken as electives with the permission of the Committee on Undergraduate Studies.

When transfer credit has been granted for a course(s) taken to satisfy the requirements for admission, students must take an additional elective(s) in the Bachelor of Technology program.

To meet the academic requirements for a Bachelor of Technology a candidate shall successfully complete the program with a minimum overall average of 60% and a minimum numeric grade of 50% in each course required for the degree.

### 4.2.1 Bachelor of Technology - Engineering and Applied Science Technology Option

- Students must take 39 credit hours with 24 credit hours from the required courses and 15 credit hours from the electives.
- At least one elective must be chosen from each of the groups A and B. MSTM 4030, 4040, and 4050 may be taken as electives with the permission of the Committee on Undergraduate Studies

**Table 3 Bachelor of Technology - Engineering and Applied Science Technology Option**

Required Courses	Group A Electives	Group B Electives
Business 1000 Business 2301 Engineering 4102 or MSTM 4020 English - 6 credit hours at the 1000 level MSTM 4010 MSTM 4100 MSTM 4200 Statistics 2500	Business 1201 Business 1600 Business 2102 Business 3320 Business 3700 Business 4000 Business 4320 or Psychology 3501 Business 6320 Economics 3360 MSTM 4003 MSTM 4005 MSTM 4040 and 4050 may be taken as electives with the permission of the Committee on Undergraduate Studies MSTM 4060	Economics 2010 Economics 2020 Economics 3080 Geography 4410 MSTM 4030 may be taken as an elective with the permission of the Committee on Undergraduate Studies Religious Studies 3830 Sociology 2120 Sociology/Anthropology 3220 Sociology/Anthropology 3317 Sociology/Anthropology 4091 Sociology 4107 or Women's Studies 4107 Sociology 4206

## 4.2.2 Bachelor of Technology - Health Sciences Technology Option

- Students must take 39 credit hours with 21 credit hours from the required courses and 18 credit hours from the electives.
- At least one elective must be chosen from each of the groups A, B, and C. MSTM 4030, 4040, and 4050 may be taken as electives with the permission of the Committee on Undergraduate Studies

**Table 4 Bachelor of Technology - Health Science Technology Option**

Required Courses	Group A Electives	Group B Electives	Group C Electives
Business 1000 Business 2301 English - 6 credit hours at the 1000 level MSTM 4100 MSTM 4200 Nursing 4002 Nursing 5210	Business 1201 Business 1600 Business 2102 Business 3320 Business 3700 Business 4000 Business 4320 or Psychology 3501 Business 6320 Economics 3360 MSTM 4003 MSTM 4040 and 4050 may be taken as electives with the permission of the Committee on Undergraduate Studies MSTM 4060	Economics 2010 Economics 2020 Economics 3080 Geography 4410 MSTM 4030 may be taken as an elective with the permission of the Committee on Undergraduate Studies Religious Studies 3830 Sociology 2120 Sociology/Anthropology 3220 Sociology/Anthropology 3317 Sociology/Anthropology 4091 Sociology 4107 or Women's Studies 4107 Sociology 4206	Biology 2040 or Biology 2041 Nursing 3023 Nursing 4701 Psychology 2010 or Psychology 2011 or Psychology 2012 Psychology 2800 Sociology 2110

## 5 Waiver of Degree Program Regulations

Students requesting waiver of University academic regulations should refer to **UNIVERSITY REGULATIONS - General Academic Regulations (Undergraduate) - Waiver of Regulations**. Every student also has the right to request waiver of degree program regulations.

### 5.1 General Information

- The Marine Institute reserves the right in special circumstances to modify, alter, or waive any Marine Institute regulation in its application to individual students where merit and equity so warrant, in the judgement of the Committee on Undergraduate Studies of the Marine Institute.
- Students requesting a waiver of a Marine Institute regulation must submit their request in writing to the head of the program who will forward a recommendation to the Chair of the Committee on Undergraduate Studies of the Marine Institute. Medical and/or other documentation to substantiate the request must be provided.
- Any waiver granted does not reduce the total number of credit hours required for the degree.

## 6 Appeal of Regulations

Any student whose request for waiver of Marine Institute regulations has been denied has the right to appeal. For further information refer to **UNIVERSITY REGULATIONS - General Academic Regulations (Undergraduate) - Appeal of Regulations**.

## 7 Course Descriptions

All courses of the Marine Institute degree programs are designated as MSTM (Maritime Studies/Technology Management).

**4001 The Organization and Issues of Shipping** will provide students with knowledge of the economic shipping environment with respect to Canada. The course will develop an understanding of basic trade theory, patterns of trade and sea routes, commodities traded by sea, and the organizational structure of shipping companies.

CR: the former Engineering 8065; Maritime Studies 4001

**4002 The Business of Shipping** will provide students with an understanding of financial statements, costs, revenues and financial performance of shipping companies as well as computing, voyage and annual cashflows. The course will develop an understanding of marine insurance and forecasting, and risk management.

PR: MSTM 4001

**4003 Environmental Management System for Technologists** will provide students with a knowledge and understanding of international standards for environmental management. The course will develop an understanding of the ISO 14000 standard, its requirements and the process for establishing an environment management system (EMS). The course will include a consideration of the documentation and other requirements for ISO 14000 registration.

CO: Admission to the Bachelor of Technology or the Bachelor of Maritime Studies program

PR: Admission to the Bachelor of Technology or the Bachelor of Maritime Studies program

**4004 Marine Environmental Management** will introduce students to the

requirements for the safe management of the marine environment. The course will introduce major environmental problems and identify the major threats to the marine environment. It will provide a working knowledge of these threats and consider the possible counter measures that may be employed by employees in the marine industry.

CO: Admission to the Bachelor of Technology or the Bachelor of Maritime Studies program

PR: Admission to the Bachelor of Technology or the Bachelor of Maritime Studies program

**4005 Trends and Issues in International Shipping** will provide students with an understanding of how regulatory bodies and their legislation have evolved to affect the modern seafarer trading internationally. This course will develop an understanding of the various rules and regulations dealing with Classification, ISM, MAPROL, SOLAS and SIRE inspections which have to be dealt with on a daily basis at sea.

**4010 Assessment and Implementation of Technology** (formerly Technology 4010) examines the effects of technology on the physical, socio-economic, historic, cultural and aesthetic environments. The course also addresses relevant legislation, the generation and evaluation of project/product alternatives, and the prediction, verification and mitigation of technological effects.

CR: Technology 4010

**4020 Economic Management for Technologists** (formerly Technology 4020) provides an introduction to the economics of technological projects. Students will study the mathematics of money, cost composition, and project evaluation, including cost comparison. They will also learn to analyze projects for decision making, including risk assessment and replacement analysis. In addition, they will learn to use suitable criteria for project selection, and to conduct sensitivity analysis.

CR: Engineering 4102; Technology 4020

**4030 Technology in the Human Context** (formerly Technology 4030) examines technology in the historical context and technology in the modern era. Students will discuss human insights, innovation, the interactions between development and technology transfer, ethics and professionalism and how to develop a technology value system.

CR: Technology 4030

**4040 Project Management for Technologists** (formerly Technology 4040) will introduce the student to the interdisciplinary field of project management. The course covers the interpersonal skills necessary to successfully lead or work effectively within a project team as well as providing an overview of certain planning and scheduling tools and techniques necessary for the planning and monitoring of projects.

CR: Technology 4040

**4050 Introduction to Quality Management** (formerly Technology 4050) will provide students with an understanding of the philosophy and concepts involved in the total quality approach to quality management. The course covers the various tools and techniques used in quality management as well as providing an overview of the role of management.

CR: Technology 4050

**4060 Advanced Technical Communications** will enhance the technical communication skills of students. The course content examines technical

writing fundamentals; information gathering, analysis, and documentation; proposal preparation; technical document applications; technical report preparation; graphics preparation; and technical presentations. The course will provide students with the knowledge and skills necessary to develop proposals, reports, and presentations for technical projects.

**4100 Technical Project and Report I** (formerly Maritime Studies 4000 and Technology 4000) requires the student to identify a research topic in a specialty area, write a concept paper and develop a proposal to be carried out in MSTM 4200. In addition, the course offers an opportunity to improve time management, critical thinking, project management, problem solving, and reading/writing skills as related to the research process.

CH: 1

CR: Maritime Studies 4000; Technology 4000

**4200 Technical Project and Report II** (formerly Maritime Studies 4000 and Technology 4000) provides a link between the other courses of the program and the technical component from the diploma program. Students will carry out an in-depth study of the topic identified in MSTM 4100. Students will fully document and present their findings through the writing of a formal technical report.

CH: 2

CR: Maritime Studies 4000; Technology 4000

PR: MSTM 4100

## 8 Maritime Studies/Technology Management (MSTM) Courses Available to Students not Enrolled in a Degree Program Offered by the Fisheries and Marine Institute

Students not in a degree program offered by the Marine Institute may register in courses from the following list if space is available.

- 4030 Technology in the Human Context
- 4040 Project Management for Technologists
- 4050 Introduction to Quality Management

Archived Previous Calendar  
Current University Calendar available at  
[mun.ca/university-calendar](http://mun.ca/university-calendar)

Archived Previous Calendar  
Current University Calendar available  
[mun.ca/university-calendar](http://mun.ca/university-calendar)

# SIR WILFRED GRENFELL COLLEGE

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## 1 Personnel - Administrative Faculty and Staff

### OFFICE OF THE PRINCIPAL

#### Principal

Ashton, J., B.A. *London School of Economics and Political Science*, M.A. *Leeds*, Ph.D. *Memorial*

#### Vice-Principal

Pike, H., B.A. *Memorial*, M.A. *Dalhousie*, Ph.D. *S.U.N.Y.*

#### Associate Vice-Principal (Research)

Bowers, W., B.Sc. *Memorial*, M.Sc., Ph.D. *Simon Fraser*

### OFFICE OF THE REGISTRAR

#### College Registrar

Noftall-Bennett, S., B.S.W. *Memorial*, M.Ed. *Mount Saint Vincent*

#### Senior College Academic Advisor and High School Liaison Officer

Carlson, N., B.A., M.Ed. *Memorial*

#### Student Recruitment Officer

Parsons, C., B.B.A. *Memorial*

#### Student Recruitment Officer

Peddle, S., B.A. *Memorial*

### STUDENT AFFAIRS AND SERVICES

#### Co-ordinator

Sparkes, M., B.A. *Mount Saint Vincent*, M.Ed. *Toronto*

#### Student Affairs Officer

Carroll, L.D., B.A.(Ed.), M.Ed. *Memorial*

#### Learning Centre Co-ordinator

Payne, L.G., B.S.W. *Memorial*

#### Manager Student Housing

Karam, J., B.Sc. *St. Joseph Univ Lebanon*, M.Sc. *Colorado State Univ*

#### Wellness Educator

Galliot, J., B.P.E. *Memorial*

### CHAPLAINS

#### United Church

Simpson, L., Rev.

#### Pentecostal Church

Andrews, C., Pastor

#### Roman Catholic

Vacant

#### Anglican

Hounsell-Drover, J., Rev.

#### Salvation Army

Gray, C., Major

### COUNSELLORS

Wilson, P., B.A., B.Ed., M.Ed. *Memorial*, Ed.D *Toronto*, Professor  
Barber, J., B.Sc., B.Ed. *Memorial*, M.Ed. *Ottawa*, Lecturer

### COMMUNITY EDUCATION AND COLLEGE RELATIONS

#### Co-ordinator

Philpott, J., B.A. *Memorial*

#### Public Relations Specialist

Gill, P., B.A.(Hons.) *Memorial*, B.J. *University of King's College*

#### Program Developer

Forward, M., B.A.(Ed.) *Memorial*

#### Conference Services Co-ordinator

Walbourne, L.

#### Facilities Co-ordinator

Walsh, J., B.A. *Memorial*

### COMPUTING AND COMMUNICATIONS

#### Manager

Rowell, R., B.Voc.Ed., B.Eng. *Memorial*

### LIBRARY

#### Associate University Librarian

Behrens, E., B.A. *Montreal*, M.A. *Windsor*, M.L.S. *McGill*

#### Public Services Librarian

McGillis, L., B.A. *McGill*, M.L.S. *Toronto*

### ADMINISTRATION AND FINANCE

#### Director

Waterman, D., B.Comm. *Memorial*

#### Staff Accountant

Hackett, W., B.Acc.S. *Calgary*

#### Bookstore Manager

Day, M.

#### Budget Assistant

Quigley, C.

#### General Services Supervisor

Hayes, C.

## 2 Personnel - Faculty Lists

### DIVISION OF ARTS

Janzen, O.U., B.A. *McMaster*, M.A., Ph.D. *Queen's*, F.R.Hist.S.; Professor, Historical Studies; Head, Division of Arts  
Baehre, R., B.A., M.A., M.Phil. *Waterloo*, Ph.D. *York*; Associate Professor and Program Chair, Historical Studies; Cross appointment with Social/Cultural Studies Program  
Fabijancic, T., B.A. *St. Francis Xavier*, M.A. *Victoria*, Ph.D. *New Brunswick*; Associate Professor, English  
Fowler, A., B.A., M.A. *Memorial*, Ph.D. *Ottawa*; Professor, English  
Freeman, D., M.A. *Oxon*, P.G.C.E. *Leicester*, Ph.D. *London*; Professor Emeritus, English  
Greenlee, J.G.C., B.A., M.A., Ph.D. *McMaster*; Professor, Historical Studies  
Jacobsen, K., B.A. *Trinity Western*, M.A., Ph.D. *Queen's*; Assistant Professor, English  
Janes, M., B.A. M.A. *Memorial*; Lecturer, French  
Maggs, W.R., B.A., M.A. *Dalhousie*, Ph.D. *New Brunswick*; Associate Professor, English  
McKenzie, S., B.A. *Victoria*, M.A. *Concordia*, Ph.D. *Toronto*; Assistant Professor, English  
Newton, M.C., Cert. of Education *King Alfred's College*, B.A., M.A., Ph.D. *McMaster*; Professor, Religious Studies  
Parker, M., B.A., M.A. *Toronto*, Ph.D. *McMaster*; Professor, Classics; Cross appointment with Historical Studies  
Peddle, D., B.A., M.A. *Memorial*, Ph.D. *Ottawa*; Associate Professor, Philosophy; Program Chair, Humanities  
Pike, H., B.A. *Memorial*, M.A. *Dalhousie*, Ph.D. *S.U.N.Y.*; Associate Professor, English; Vice-Principal  
Sherlow, L., B.A., Cert. Ed. *Birmingham*, M.A. *Carleton*, Ph.D. *Ottawa*; Associate Professor, English  
Steffler, J.E., B.A. *Toronto*, M.A. *Guelph*; Professor, English  
Thackray, M., B.A. *Waterloo*, M.A., Ph.D. *S.U.N.Y.*; Assistant Professor, English; Program Chair, English  
Ware, M., B.A. *Queen's*, M.A., Ph.D. *Dalhousie*; Associate Professor, English

#### Cross Appointment

Curtis, G., B.F.A., B.A. *Calgary*, Ph.D. *Essex*; Associate Professor, Art History, Visual Arts; Cross appointment with Historical Studies

### DIVISION OF FINE ARTS

Coyne, M., B.F.A. *Mt. Allison*, M.F.A. *Regina*; Professor, Visual Arts  
Curtis, G., B.F.A., B.A. *Calgary*, Ph.D. *Essex*; Associate Professor, Art History, Visual Arts  
Foulds, D., B.F.A., M.F.A. *Saskatchewan*; Associate Professor, Visual Arts  
Hansen-robitschek, r., B.A. *Ottawa*, *National Theatre School of Canada*; Assistant Professor, Theatre  
Hasnain, A., B.A. *Toronto*, *National Theatre School of Canada*;



Associate Professor, Theatre  
 Hennessey, T., B.F.A. *Memorial*, M.F.A. *Calgary*; Assistant Professor and Chair, Theatre  
 Hunt, B., Diploma in Fine Art *Manitoba*, M.F.A. *Montreal*; Associate Professor, Visual Arts; Winner of the President's Award for Outstanding Research, 2004-2005  
 Jones, K., B.A. *California*, H.D.F.A. *The Slade School of Fine Art, University College London*; Professor, Visual Arts  
 Judge, C., B.F.A. *Alberta*, M.F.A. *Victoria*; Assistant Professor, Visual Arts; on leave  
 LeBlanc, P., B.F.A. *Moncton*, M.F.A. *Montreal*; Assistant Professor, Visual Arts, and Chair, Visual Arts  
 Livingstone, K.D., B.A. *Bishop's*, M.A. (Theatre) *British Columbia*; Associate Professor and Head, Division of Fine Arts  
 MacCallum, M., B.F.A. *Concordia*, M.V.A. *Alberta*; Professor, Visual Arts  
 Morrish, D., B.F.A. *Manitoba*, M.F.A. *Calgary*; Professor, Visual Arts  
 Nelson, C., B.F.A. *Memorial*, M.F.A. *Wimbledon School of Design*; Assistant Professor, Theatre  
 Sasaki, L., B.F.A. *Manitoba*, M.F.A. *NSCAD*; Associate Professor, Visual Arts

### Cross Appointment

Monaghan, P.K., B.Sc. *Liverpool*, Ph.D. *Western Ontario*; Associate Professor, Environmental Science (Chemistry); Cross appointment with Chemistry

### DIVISION OF SCIENCE

Bateman, L.E., B.Sc.(Hons.) *Dalhousie*, M.Sc. *Memorial*; Associate Professor, Environmental Science (Biology); Head of the Division  
 Abhyankar, S.B., B.Sc., M.Sc. *Bombay*, M.S., Ph.D. *Florida State*; Associate Professor, Environmental Science (Chemistry)  
 Andrews, S.E., B.Sc., B.Ed., M.Sc. *Memorial*; Associate Professor, Environmental Science (Biology); Winner of the President's Award for Distinguished Teaching 2002-2003  
 Berger, A.R., B.Sc.(Hons.) *Dalhousie*, M.Sc. *Melbourne*, Ph.D. *Liverpool*; Adjunct Professor, Earth Science  
 Bowers, W.W., B.Sc.(Hons.) *Memorial*, Ph.D. *Simon Fraser*; Professor, Environmental Science (Biology); Associate Vice-Principal (Research)  
 Bussey, B., B.Sc., M.Sc. *Memorial*; Associate Professor, Mathematics, Statistics and Computer Science  
 Campbell, C.E., B.Sc. *British Columbia*, M.Sc. *Alberta*, Ph.D. *Memorial*; Associate Professor, Environmental Science (Biology); Program Chair of Environmental Science  
 Dust, J.M., B.Sc.(Hons.) *Waterloo*, M.Sc. *Dalhousie*, Ph.D. *Queen's*, M.C.I.C.; Associate Professor, Environmental Science (Chemistry)  
 Fleming, S.P., B.Sc.(Hons.), M.Sc. *Acadia*, Ph.D. *Queen's*; Adjunct Professor, Environmental Science  
 Forbes, D., B.Sc. *Lyndon State*, M.Sc. *St. Mary's*, Ph.D. *Victoria*; Professor, Physics; Winner of the President's Award for Outstanding Research, 1993-1994  
 Gallant, R., B.Sc.(Hons.) *Memorial*, M.Sc., Ph.D. *Waterloo*; Assistant Professor, Mathematics, Statistics and Computer Science  
 Gunther, G., B.Sc., M.Sc., Ph.D. *Toronto*; Professor, Mathematics, Statistics and Computer Science; Winner of the President's Award for Distinguished Teaching, 1994-95; Program Chair of General Science  
 Hooper, R.G., B.Sc. *Victoria*, Ph.D. *Portsmouth*; Curator, Phycological Herbarium; Director, Bonne Bay Marine Station; Associate Professor; Cross appointment with Biology  
 Iams, W.J., B.A. *Johns Hopkins*, M.Sc. *Dalhousie*, Ph.D. *Memorial*; Associate Professor, Environmental Science  
 Knight, T.W., B.Sc.(Hons.) *Guelph*, M.Sc. *Lakehead*, Ph.D. *Memorial*; Adjunct Professor, Environmental Science  
 Krishnapillai, M., B.Sc.(Agric.), M.Phil. *Peradeniya*, Ph.D. *Manitoba*; Assistant Professor, Environmental Science (Soils and Remediation)  
 MacLeod, R., B.Sc. *Concordia*, M.Sc. *McMaster*; Lecturer, Mathematics, Statistics and Computer Science  
 Mann, H.E., B.A.(Hons.), M.Sc., Teach. Cert. *Saskatchewan*; Associate Professor, Environmental Science (Biology)

Monaghan, P.K., B.Sc. *Liverpool*, Ph.D. *Western Ontario*; Associate Professor, Environmental Science (Chemistry); Cross appointment with Theatre  
 Moroni, M.T., B.Agr.Sci.(Hons.), Ph.D. *Tasmania*; Adjunct Professor, Environmental Science  
 Parkinson, D.R., B.Sc. *Brock*, Ph.D. *London*; Associate Professor, Environmental Science (Chemistry)  
 Rayner-Canham, G.W., B.Sc. *London*, D.I.C. *Imperial College*, Ph.D. *London*; Professor, Environmental Science (Chemistry); Winner of the Sir Wilfred Grenfell College Teaching Award, 2003; Winner of the President's Award for Distinguished Teaching, 2005-2006  
 Richards, R.W., B.Sc. *Calgary*, M.Sc., Ph.D. *McMaster*; Associate Professor, Mathematics, Statistics and Computer Science  
 Rouleau, P., B.Sc. *UQAM*, Ph.D. *Alberta*; Associate Professor, Environmental Science/Physics  
 Rowe, W., B.Sc. *Memorial*, M.Sc. *Carleton*; Associate Professor, Mathematics, Statistics and Computer Science  
 Sodhi, A., B.Math. *Waterloo*, M.Sc., Ph.D. *Queen's*; Associate Professor, Mathematics, Statistics and Computer Science  
 Warkentin, I.G., B.Sc., Ph.D. *Saskatchewan*; Associate Professor, Environmental Science (Biology)

### DIVISION OF SOCIAL SCIENCE

Duffy, J., B.A., M.A. *Carleton*, Ph.D. *York*; Professor, Psychology; Head, Division of Social Science  
 Ashton, J., B.A. *London School of Economics and Political Science*, M.A. *Leeds*, Ph.D. *Memorial*; Associate Professor, Folklore; Principal  
 Bartels, D.A., B.A. *Occidental*, M.A., Ph.D. *Alberta*; Professor, Anthropology and Sociology; Social/Cultural Studies  
 Buckle, J.L., B.Sc.(Hons.) *Acadia*, M.A., Ph.D. *York*; Assistant Professor, Psychology  
 Cake, L.J., B.A. *Queen's*, M.Sc. *Memorial*, Ph.D. *Queen's*; Professor, Psychology  
 Carroll, D.A., B.P.E. *Memorial*, M.A. *Alberta*; Associate Professor, Human Kinetics and Recreation and Environmental Studies; Chair of Environmental Studies Program  
 Corbin Dwyer, S., B.A., B.Ed. *Memorial*, M.Ed. *Dalhousie*, Ph.D. *Calgary*; Associate Professor, Psychology  
 Croll, M.C., B.A. *Mount St. Vincent*, M.A. *Dalhousie*, M.Ed. *University of New Brunswick*, Ph.D. *University of Stirling*; Visiting Assistant Professor, Anthropology and Sociology, Social/Cultural Studies  
 Emke, I., B.A. *Ohio State*, M.A. *Windsor*, Ph.D. *Carleton*; Associate Professor, Anthropology and Sociology; Program Chair of Social/Cultural Studies  
 Ferguson, D.A., B.A., M.A., Ph.D. *Western Ontario*; Associate Professor and Program Chair, Psychology  
 Harris Walsh, K., B.A.(Hons.), M.A. *York*; Lecturer, Folklore and Social/Cultural Studies  
 Ionescu, M.O., B.A., Ph.D. *Academy of Economic Studies, Bucharest*; Assistant Professor, Business and Economics  
 Klassen, D.H., B.A. *Wilfred Laurier*, M.A. *Manitoba*, Ph.D. *Indiana*; Assistant Professor, Folklore and Social/Cultural Studies  
 Mintz, E.P., B.A. *British Columbia*, M.A. *York*; Associate Professor, Political Science and Environmental Studies  
 Nicol, K.S., B.A., M.Sc. *British Columbia*; Associate Professor, Geography and Environmental Studies  
 Novakowski, N., B.A. *Toronto*, M.A., Ph.D. *Ottawa*; Assistant Professor, Geography and Environmental Studies  
 Pitcher, J.B., B.A., M.B.A. *Memorial*; Assistant Professor, Business Administration  
 Sabau, G.L. B.A., Ph.D. *Academy of Economic Studies, Bucharest*; Assistant Professor, Economics and Environmental Studies  
 Stewart, D.J., B.A., M.A. *Memorial*, Ph.D. *Miami*; Associate Professor, Psychology  
 Walsh, K., B.A., Cert.NL.Studies, B.Ed., M.A. *Memorial*; Lecturer, Folklore and Social/Cultural Studies  
 Widdowson, F., B.A.(Hons.), M.A. *University of Victoria*; Lecturer, Political Science and Environmental Studies  
 Wright, S.L., B.A. (Hons.), M.Sc. *Simon Fraser*, Ph.D. *Dalhousie*; Assistant Professor, Psychology

## 3 General Information

The College, a campus of Memorial University of Newfoundland, was established in September 1975. In 1979 it was named Sir Wilfred Grenfell College honouring the memory of the medical missionary who pioneered medicine in northern Newfoundland and along the coast of Labrador until his death in 1940.

Four year degree programs in arts, science, nursing and fine arts may be completed at Sir Wilfred Grenfell College. The Bachelor of Arts degree is available in environmental studies, English, historical studies, humanities, psychology, social/cultural studies and tourism and the Bachelor of Arts (Honours) may be obtained in psychology. The Bachelor of Science and Bachelor of Science (Honours) are offered in environmental science, general science, and psychology, and the University's four year Bachelor of Nursing degree is offered in conjunction with the Western Regional School of Nursing in Corner Brook. Bachelor of Fine Arts degrees are conferred in visual arts and theatre. Most of these programs are different from programs offered on the St. John's campus and most are available only at Sir Wilfred Grenfell College.

Students may complete the first two years of the University of New Brunswick's forest resource program at Sir Wilfred Grenfell College. In addition students may complete their first year in all programs offered at the St. John's campus (except music). With the exception of education, social work, pharmacy and medicine, students who wish to continue their education in one of the University's professional schools normally transfer to the St. John's campus after one year. Students who wish to pursue a degree in music are advised to proceed directly to the St. John's campus for their first year of university studies.

The School of Continuing Education offers distance education courses in Corner Brook and in northern and western Newfoundland and Labrador. The Division of Community Education and College Relations also offers a wide variety of non-credit courses to the students at the College and to the general public.

The College campus affords a spectacular view of the city of Corner Brook and the scenic Bay of Islands. The Arts and Science Building houses administrative and academic units, a bookstore, an athletics and recreation wing, a student residence and the Student Centre. The Library and Computing Building includes the Ferriss Hodgett Library, a computer lab and a high tech lecture theatre. The Fine Arts Building contains facilities for students of theatre and visual arts, the college community and the general public. It features a 225 seat "black box" theatre, dressing rooms, scenery, costume and properties workshops, as well as an actors' green room and a rehearsal hall. The Fine Arts Building also includes an art gallery, art storage vault, studios for drawing, painting, sculpture, multi-media and photography, darkrooms, and workshops for lithography, intaglio and serigraphy. The Forest Centre is a shared facility housing the College's forestry program as well as the Newfoundland Division of the Canadian Forestry Service and the Western Newfoundland Model Forest Incorporated. All campus buildings are connected, mostly by skywalks.

### 3.1 Student Services

The mission of Student Services is to promote the intellectual, social, spiritual, and physical development of all students. By advocating for students, providing the highest quality service, and involving students in leadership roles, Student Services strives to help students realize their full potential - to become successful students, caring individuals, and productive citizens.

Student Services offers many programs and activities which support this mission, such as student employment programs, scholarships and awards, orientation, recreation and wellness, academic support, and student housing.

Students are encouraged to bring concerns and issues associated with life at University to Student Services. Staff are always interested in suggestions for new initiatives which will meet students' needs.

Student Services is located in the Student Services Centre, AS 233 at Sir Wilfred Grenfell College. Further information may be obtained by telephone to (709) 637-6232, or by e-mail at [saffairs@swgc.mun.ca](mailto:saffairs@swgc.mun.ca) or through the website at [www.swgc.mun.ca/student](http://www.swgc.mun.ca/student).

### 3.2 The Learning Centre

One of the most utilized components of Student Services is the Learning Centre, Grenfell College's one-stop shop for academic support. Staff in the Centre assist students with career planning and provide writing and math help. The Learning Centre also offers Peer Tutoring and runs the Supplemental Instruction program.

The co-ordinator of the Learning Centre is also responsible for helping students who require accommodations because of a disability.

The Learning Centre is located in AS 234. Further information may be obtained by contacting the Centre by telephone to (709) 637-6268 or through the website at [www.swgc.mun.ca/centre](http://www.swgc.mun.ca/centre).

### 3.3 Student Housing

Student Housing currently offers accommodation for 400 students in a suite-style residence mainly for 1st year students and in chalet apartments for families and students beyond their first year. In our residence every two rooms form a suite, where two students share a fridge and bathroom. In each apartment, four students share a living room, kitchen and one-and-a-half baths, but like the residence, each student has his/her own room. Individual phones and Internet ports are provided.

Student Housing facilitates a variety of programs and activities to meet the diverse interests of residents and encourages students to get involved.

Student Housing will also assist students seeking off campus accommodation by providing an online database of boarding houses/apartments in the Corner Brook area.

Further information may be obtained by telephone to (709) 637-6266, or by e-mail at [resinfo@swgc.mun.ca](mailto:resinfo@swgc.mun.ca), or through the website at [www.swgc.mun.ca/swgc-res/](http://www.swgc.mun.ca/swgc-res/), or at the Housing Office at Residence Room 221.

### 3.4 Recreation & Wellness

Sir Wilfred Grenfell College offers a distinctive program of recreation and wellness activities that contributes to the well being and personal and social development of students. The college has a 25 metre pool, a gymnasium and an outdoor multi-use court. Students also have the opportunity to use various recreational facilities on the west coast of this province. Students are able to participate in a variety of recreation programs such as intramural sports, step aerobics, yoga and "learn to" programs that include activities like downhill skiing, kayaking and swimming.

Through a partnership with the Western Regional School of Nursing, a Wellness Centre operates at Grenfell on a part-time basis during the academic year.

The role of the centre is to enhance education and awareness of various lifestyle, health and well-being issues relevant to students at university.

### 3.5 Grenfell College Student Union

The Grenfell College Student Union (GCSU), Local 136, CFS, represents students' interests to the College administration and on a provincial and national level through the Canadian Federation of Students. The GCSU also promotes artistic, literary, educational, social, recreational, charitable, and sporting activities for the enhancement of the students of the College.

All full and part-time students pay GCSU fees and upon registration become members of the Grenfell College Student Union.

### 3.6 Counselling Services

The College has two professional counsellors available to assist students with their concerns. The counsellors provide a free and confidential service that includes career, academic, and personal counselling. The counsellors meet with their clients individually and assist them with a wide range of concerns. When necessary, the counsellors can arrange referrals to other professionals in the community.

### 3.7 Library

The Ferriss Hodgett Library is located on levels 2 and 3 of the Library & Computing Building, with seating for 203 users and includes group study rooms, audio-visual and computer carrels.

The Library holds over 100,000 books and 450 current subscriptions, along with collections of audio-visual materials, government documents, microforms and periodicals, and access to many e-journals.

A full range of public services is available including reference assistance, orientation tours and interlibrary loans, as well as access to electronic information resources, internet, spreadsheet, word processing and presentation software.

As a branch of the University Library, the Ferriss Hodgett Library also provides its users with access to the collections and services of all other Memorial University of Newfoundland libraries.

### 3.8 Statement of Academic Purpose

Sir Wilfred Grenfell College, as part of Memorial University of Newfoundland, is a four year undergraduate degree granting institution offering a liberal education in arts and science and a professional education in nursing, theatre and visual arts. In addition, the College continues to accommodate students who wish to complete their degrees at Memorial University of Newfoundland in St. John's or at universities elsewhere.

At Sir Wilfred Grenfell College a liberal education means a critical and open-minded pursuit of knowledge providing students with the intellectual tools to enable them to respond to a rapidly changing world. A liberal education marks the start of preparation for a career and it may lead to graduate work in a number of fields. In a broader sense it is intended to build a foundation for social, cultural and recreational interests that will help students move toward a meaningful personal and professional life. Academically, the aim of Sir Wilfred Grenfell College is to enable students to be open to new ways of thinking and to gain a lasting intellectual self-confidence so that they may have both the ability and the desire to be life-long learners.

At Sir Wilfred Grenfell College the goal of high quality education is reflected in the following commitments:

1. to teach students in a variety of challenging contexts and in general provide them with a personalized learning environment;
2. to maintain high academic standards;
3. to foster excellence in teaching, to encourage scholarship, research, performance and artistic endeavour, and to engage students, where appropriate, in these activities.

## 4 The Bachelor of Arts and Bachelor of Science Degree Programs

### 4.1 General Regulations

For the Bachelor of Arts and Bachelor of Science degrees at Sir Wilfred Grenfell College students must complete a minimum of 120 credit hours made up of the following components:

1. Core Program Requirements (see below)
2. An approved concentration of courses known as a Major
3. An approved concentration of courses known as a Minor

Note: A Minor is not required for interdisciplinary programs or for Bachelor of Science in Psychology. However, students in such programs may choose to complete a Minor

4. Elective courses

### 4.2 Core Program Requirements

#### 1. Literacy Requirement

Thirty credit hours in Writing courses which must include 6 credit hours in first-year English. Up to 6 credit hours in languages other than English may be used to satisfy the literacy requirement. Courses in this group are identified with the designation W and are listed in the table, **Designated Writing Courses (W)**.

Courses in this category must either be completed through on-campus offerings at Sir Wilfred Grenfell College or be demonstrated to be equivalent to Grenfell writing courses.

#### 2. Quantitative Reasoning and Analysis Requirement

Six credit hours in Quantitative Reasoning and Analysis courses. Courses in this group are identified with the designation QRA and are listed in the table, **Designated Quantitative Reasoning and Analysis Courses (QRA)**.

#### 3. Breadth of Knowledge Requirement

Six credit hours from each of the three groups identified below for a total of 18 credit hours. The courses chosen can be any courses within the disciplines identified. However, students are not permitted to use these courses to meet the Quantitative Reasoning and Analysis requirement nor the first-year English requirements.

Group A: Art History, Classics, English, History, HKR, Humanities, Languages, Philosophy, Religious Studies, Theatre, Visual Arts

Group B: Anthropology, Business, Economics, Education, Environmental Studies, Folklore, Geography, Political Science, Psychology, Sociology, Tourism Studies, Women's Studies

Group C: Biology, Biochemistry, Chemistry, Computer Science, Earth Sciences, Environmental Science, Mathematics, Physics, Science

### 4.3 Major

1. The requirements for a Major can be fulfilled in one of two ways:
  - a. minimum of 36 credit hours in a single discipline or

b. minimum of 72 credit hours in an interdisciplinary area

Notes: 1. *Students choosing a single discipline major (with the exception of Bachelor of Science in Psychology) must complete one of the following: (i) minor or (ii) with the permission of the appropriate program chair(s), a second major.*  
2. *Actual credit hours required for specific disciplines will vary.*

- All Majors require a minimum of 12 credit hours in 3000-level courses, 6 credit hours in 4000-level courses and 3 credit hours in a 4000-level senior project.
- A candidate must follow the specific requirements for each major program as set forth in the Sir Wilfred Grenfell College section of the University Calendar
- Single discipline majors are available in following areas:  
Division of Arts: English, Historical Studies  
Division of Social Science: Psychology (B.A. and B.Sc.); Tourism Studies  
Interdisciplinary majors are available in following areas:  
Division of Arts: Humanities  
Division of Social Science: Environmental Studies, Social/Cultural Studies  
Division of Science: Environmental Science, General Science

#### 4.4 Minor

A minimum of 24 credit hours must be completed in a single discipline or interdisciplinary area other than that of the Major. Minors are available in the following areas:

Division of Arts: Classics, English, Historical Studies, Humanities, Philosophy, Religious Studies  
Division of Social Science: Business, Canadian Studies, Environmental Studies, Folklore, Geography, Psychology, Social/Cultural Studies, Sociology; Tourism Studies  
Division of Fine Arts: Art History  
Division of Science: Environmental Science, Mathematics, Science

A candidate must follow the requirements for the Minor program as set forth in the Sir Wilfred Grenfell College section of the University Calendar.

As an alternative to a Minor, a second Major may be completed and students must meet all general and departmental or program regulations for both Majors.

Any student enrolled in the Sir Wilfred Grenfell College BA Degree with a Major in English who has completed the BFA (Theatre) Degree at Sir Wilfred Grenfell College will be considered to have fulfilled the requirements for a Minor in Theatre.

#### 4.5 Electives

Courses to make up the total of 120 credit hours, other than those required for the core program and Major/Minor requirements, may be chosen according to the following guidelines:

- Any courses in arts, social science, science and fine arts
- Up to 15 credit hours in other subject areas.

Notes: 1. *Course prerequisites may be waived by division heads or program chairs of the disciplines or programs in question. In special circumstances the Academic Studies Committee may waive the requirements that apply to these degree programs.*  
2. *Courses will be designated Writing courses by the Academic Studies Committee. A Writing course is a course in which a minimum of 30 percent of the course grade involves a specific component consisting of written work on which students will receive feedback. For the purpose of this regulation, the final examination will not be counted as part of the evaluated Writing component.*  
3. *Courses will be designated Quantitative Reasoning and Analysis by the Academic Studies Committee. The Quantitative Reasoning and Analysis (QRA) Requirement is intended to help students develop a degree of appreciation of numerical, statistical and/or symbolic modes of representation, as well as an appreciation of the analysis, interpretation and broader quantitative application of such representations.*  
4. *Students may devise a Major/Minor of their own choosing in close consultation with a faculty advisor and with approval of appropriate head(s). Such "open" programs must be approved by the Academic Studies Committee.*  
5. *Sir Wilfred Grenfell College reserves the right to limit the number of spaces available in each Major/Minor program.*

#### 4.6 Advice to Students on Planning a Program

When planning the sequence of courses for a Major or Minor Program, students should seek advice from the Office of the Registrar or the appropriate Division Office.

Notes: 1. *A student may not use the same course to satisfy the requirements for both a Major and a Minor.*  
2. *Courses listed for a Major or for a Minor may require prerequisite courses not listed in the program requirements. Please consult all course descriptions for prerequisites.*

## 5 Regulations for the Honours Degrees of Bachelor of Arts and Bachelor of Science at Sir Wilfred Grenfell College

Programs are offered leading to the Honours Degrees of Bachelor of Arts and Bachelor of Science. An Honours degree requires, over and above the requirement of the General degree, a concentration at an advanced level in an approved field, consisting of a subject or subjects of specialization and/or related subjects, and a high quality of work throughout the program. An Honours degree is of distinct advantage to candidates who plan advanced work or careers in their chosen fields and also to those who have a clear commitment to some special field of study. An Honours degree with first or second class standing is, in many cases, a prerequisite for admission to a graduate program.

### 5.1 Admission and Registration

- Admission to the Honours degree is competitive and limited, depending upon available resources. Candidates should consult the criteria established for the program in question. To be considered for admission to an Honours program a candidate shall complete an "Application For Admission to the Honours Program" form. The application must be approved by the Program Chair of the Major before the candidates can be admitted to the program.

Note: *A candidate who wishes to enter an honours program is strongly advised to consult the Program Chair at the earliest possible date, as it may not be possible to complete the requirements for the degree in the normal time if the decision to embark on the program is delayed beyond the end of the second year.*

- Students who have been awarded the General Degree of Bachelor of Arts or Bachelor of Science at Sir Wilfred Grenfell College may

convert it to an Honours Degree of Bachelor of Arts or Bachelor of Science by following procedure outlined in 1. above.

3. Before registering for any semester or any session, the candidate is strongly advised to consult with the Program Chair on the student's choice of courses. Failure to comply with this requirement may result in denial of access to certain courses.

## 5.2 Majors

The Honours Degree of Bachelor of Arts is available in Psychology and the Honours Degree of Bachelor of Science is available in Environmental Science, General Science, and Psychology.

## 5.3 Course Requirements

Candidates for the Honours Degree of Bachelor of Arts or Bachelor of Science shall complete a program of studies which shall consist of not fewer than 120 credit hours subject to the following regulations:

1. All candidates are required to complete the Core Program requirements governing the Bachelor of Arts and Bachelor of Science degrees at Sir Wilfred College.
2. All candidates must also submit an Honours thesis or dissertation on an approved topic which may be followed by an oral examination thereon. Two copies of the Honours thesis/dissertation must be submitted to the University Library upon completion. All Honours theses/dissertations in the University Library shall be available for unrestricted consultation by students and faculty except under very exceptional circumstances which must be approved by the Academic Studies Committee. Copyright remains with the author. A signed release form must accompany a thesis or dissertation when it is submitted to the University Library.
3. Further courses shall be chosen:
  - a. minimum 60 credit hours in the major and, where applicable, not fewer than 24 credit hours in the minor; and
  - b. courses to make up a minimum of 120 credit hours, other than those required for the Core Program, major and minor, shall be chosen as follows:
    - i. any courses in Arts, Science, Social Science and Fine Arts
    - ii. up to 15 credit hours in other subject areas.

## 5.4 Program Regulations

Candidates for Honours degrees must comply with such additional requirements of the appropriate Program(s) as approved by the Senate and printed in the University Calendar.

## 5.5 Residence Requirements

To qualify for an Honours degree in Arts or Science, a candidate shall attend this University for a minimum of four semesters as a full-time student in the program of specialization except with the permission of the Academic Studies Committee.

## 5.6 Academic Standing

In order to graduate with an Honours degree, a candidate shall obtain:

1. A grade of 'B' 70% or better, OR an average of 75% or higher in the courses that comprise the minimum number of credit hours in the Honours subject(s) prescribed by the program concerned, excluding 1000-level courses. A grade of 70% or better must be obtained in the Honours dissertation; and
2. An average of at least 2.75 points per credit hour in the courses required for the degree. (see **UNIVERSITY REGULATIONS - General Academic Regulations (Undergraduate)**, for explanation of the point system.)

Notes: 1. *Students who wish to fulfill the requirements of 5.6, 1. above using repeated or substituted courses must obtain approval of the Program Chair and the Academic Studies Committee. The Honours thesis or dissertation may not be repeated or substituted.*

2. *For a definition of "Honours subject(s) prescribed by the Program concerned" in 5.6., 1. above, students should consult the regulations governing specific Honours degree programs.*

## 5.7 Classification of Degrees

1. If a candidate's general average is 3.5 points or better per credit hour in required courses and his/her average is 3.5 per credit hour in the courses in the Honours subject (excluding 1000-level courses), the candidate shall be awarded an Honours degree with First Class standing.
2. If a candidate fulfils the conditions of 5.6 but not of clause 5.7, 1., the candidate shall be awarded an Honours degree with Second Class standing.
3. No classification will be given to the degree awarded a candidate who has completed (i) fewer than one half of the courses required for the degree at this University, or (ii) who has completed fewer than one half of the courses required for the degree at this University since 1959. All candidates for such degrees shall, however, fulfil the condition of paragraph 6 on the courses taken at this University since September 1959 in order to qualify for the degree.
4. A declared candidate for an Honours degree who fails to attain the academic standing specified in clause 6, but fulfils the academic requirements for a General degree shall be awarded a General degree, the classification of which shall be determined in accordance with **UNIVERSITY REGULATIONS - General Academic Regulations (Undergraduate)**.

In these regulations, all references to the Program Chair are to be read as "Program Chair or delegate".

## 5.8 Designated Writing Courses (W)

<b>Anthropology:</b> 2240, 2300, 2500, 3080, 3083, 3140, 3520, 3525, 4072, 4440
<b>Biology:</b> 2040, 2041, 2122, 2600
<b>Business:</b> 1201, 2000
<b>Chemistry:</b> 2210
<b>Classics:</b> 1100, 1120, 1121, 1200, 2010, 2015, 2020, 2035, 2040, 2055, 2060, 2701, 2800, 2801, 3010, 3020, 3110, 3111, 3130
<b>Earth Science:</b> 2914, 2915
<b>English:</b> All English courses listed with the Sir Wilfred Grenfell College English Program and English 1110 and 2010
<b>Environmental Science:</b> 2370, 2371, 3131, 3210, 3211, 3260, 4000, 4133, 4950, 4951, 4959
<b>Environmental Studies:</b> 4000, 4950
<b>Folklore:</b> 1000, 1050, 2000, 2300, 2401, 2500, 2600, 3130, 3200, 3300, 4072, 4440
<b>French:</b> 2100, 2101, 2601, 2602, 3100, 3101
<b>Geography:</b> 2001, 2302
<b>History:</b> All history courses listed with the Sir Wilfred Grenfell College Historical Studies Program
<b>Human Kinetics and Recreation (HKR):</b> 2300, 3330, 3340, 3350, 3410
<b>Humanities:</b> 3000, 4000, 4950
<b>Philosophy:</b> 1001, 1200, 1600, 2200, 2220, 2230, 2701, 2702, 2800-2810, 3120, 3150, 3160, 3400, 3600, 3610, 3620, 3701, 3730, 3850, 3860, 3940, 4200-4790, 4200, 4250, 4700
<b>Political Science:</b> 1010, 1020, 2000, 2200, 2711, 3550, 3731
<b>Psychology:</b> 4910, 4950, 4951, 4959
<b>Religious Studies:</b> 1000, 1010, 1020, 2011, 2013, 2050, 2051, 2610, 3010, 3020, 3030, 3040, 3200, 3401, 3820, 3840, 3880
<b>Science:</b> 3000, 3001, 4000, 4950, 4951, 4959
<b>Social/Cultural Studies:</b> 4000, 4100, 4950
<b>Sociology:</b> 2240, 2610, 3140, 3150, 3290, 3395, 4072
<b>Tourism Studies:</b> 1100, 2000, 3230, 3240, 3800, 4010, 4950
<b>Visual Arts:</b> 2700, 2701, 3620, 3700, 3701, 3702-3721, 3820, 4060, 4700-4729, 4730, 4731, 4740, 4741
<b>Women's Studies:</b> 2001
<b>University:</b> 1010

## 5.9 Designated Quantitative Reasoning and Analysis Courses (QRA)

<b>Arts</b> Philosophy 2210, 3110
<b>Fine Arts</b> None
<b>Science</b> Biochemistry 1430 Biochemistry 1430 Biology 2250, 2600 Chemistry (All courses with the exception of Chemistry 1900) Computer Science (All courses) Earth Science 2150 Environmental Science (All courses with the exception of: 1000, 2360, 2370, 2371, 3072 and 4000) Forestry 1010, 1011, 2225 Mathematics (All courses) Statistics (All courses) Physics (All courses)
<b>Social Science</b> Business 1101, 2101, 2401, 4500 Economics 2010, 2020, 3150 Environmental Studies 2000 Geography 3222 Psychology 2925, 2950, 3950 Sociology 3040

## 6 Division of Arts

Bachelor of Arts General degrees only.

Majors are available in English, Historical Studies, Humanities.

Minors are available in Classics, English, Historical Studies, Humanities, Philosophy, Religious Studies.

### 6.1 Major in English Language and Literature

Program Chair: Dr. K. Jacobsen

The Major consists of 42 credit hours including an English Core and one of four possible concentrations.

#### 6.1.1 English Core

1. English 1000 and 1001 or equivalent
2. English 2005, 2006, 2007, 3205 or 3206, 3395, 4105

#### 6.1.2 Concentrations

Students must complete 18 credit hours in one of the following concentrations. Within each concentration, there must be a minimum of 6 credit hours at the 3000 level and 6 credit hours at the 4000 level.

##### 1. Canadian Literature Concentration

English 2146, 4950 and 12 credit hours in Canadian Literature from the following selection: English 2155, 2156, 3145, 3147, 3148, 3149, 4307, 4825-35.

##### 2. Dramatic Literature Concentration

English 2350, 2351, 3275, 4950 and 6 credit hours in Dramatic Literature from the following selection: English 3021, 3171, 3181, 3205 or 3206 (whichever course has not been used to fulfil the requirements of the English Core), 4302, 4305, 4307, 4308, 4316, 4317, 4836-44.

##### 3. Modern Literature Concentration

English 3215, 3216, 4950 and 9 credit hours in Modern Literature from the following selection: English 2215, 2242, 2705, 2805, 2870, 3810, 3275, 3905, 4245, 4246, 4302, 4305, 4308, 4905.

##### 4. Combined Concentration

A total of 18 credit hours from English Concentration Courses which must include:

- a. At least 6 credit hours from one of three concentrations (Canadian, Dramatic, Modern) as specified below and an English 4950 project within the area chosen:  
 Canadian Literature: 2146 and at least 3 additional credit hours in this concentration or  
 Dramatic Literature: 2350 or 2351 and at least 3 additional credit hours in this concentration or  
 Modern Literature: 3215 or 3216 and at least 3 additional credit hours in this concentration.
- b. At least 3 credit hours from each of the other two concentrations.

### 6.2 Major in Historical Studies

Program Chair: Dr. R. Baehre

The Major consists of a minimum of 42 credit hours in History courses and 15 additional credit hours drawn from a prescribed list of courses from other disciplines.

The student must complete:

1. History 1100, 1101, 3840 and 4950.
2. Twelve credit hours from courses in each of the two following categories:
  - a. **Early Western History**  
 History/Classics 2035, 2040  
 History 2100, 2200, 2300, 2320, 2330, 3050, 3110, 3760  
 History/Anthropology 3520  
 History/Art History 2700
  - b. **Later Western History**  
 History 2110, 2120, 2210, 2310, 2500, 3060, 3120, 3250, 3440, 3460, 3490, 3770, 3800-3830  
 History/Art History 2701  
 History/Anthropology 3525  
 History/Economics 3630
3. Six credit hours in 4000-level History courses from the following list (no more than 3 credit hours from any single category):  
 History 4110-4130  
 History 4210-4229  
 History 4230-4231  
 History 4240-4260  
 History 4310-4330  
 History 4410-4430  
 History 4560-4570  
 History/Art Hist. 4730-4731
4. Fifteen credit hours in courses from the following list:  
 Anthropology 1031  
 Economics 2010  
 Economics 2020  
 English 2005  
 English 2006  
 English 2007  
 Folklore 1000

Folklore 1050  
 Folklore 2401  
 French 1501  
 French 1502  
 French 2100  
 French 2101  
 French 2601  
 French 2602  
 Geography 1000  
 Geography 1001  
 Geography 2001  
 Philosophy 1600  
 Philosophy 2701  
 Philosophy 2702  
 Philosophy 3400  
 Political Science 1000  
 Political Science 2000  
 Political Science 2500  
 Religious Studies 2013  
 Religious Studies 2050  
 Religious Studies 2051  
 Sociology 2000  
 Sociology 3040  
 Sociology 3150

Note: *These are courses that are thematically or methodologically relevant to the study of History (students may be allowed to take others with permission of the Program Chair). Applicable courses used to satisfy the Minor requirements may also be counted as Historical Studies credits. No more than 6 credit hours from any one discipline will be counted toward Historical Studies Major.*

5. Students will normally be allowed to register in History courses having the initial digit '3' only after they have successfully completed 6 credit hours in courses having the initial digit '2'.
6. Students are required to take 6 credit hours in history (in addition to History 1100/1101) or have permission of the instructor before enrolling in any fourth-year history course.

### 6.3 Major in Humanities

Program Chair: Dr. D. Peddle

The Major consists of a Humanities Core requirement and a Social Sciences requirement.

#### 1. Humanities Core Requirement

- a. Humanities 3000, 4000, and 4950
- b. A total of 39 credit hours in two disciplines (referred to as Discipline One and Discipline Two) from Group A below
  - i. At least 21 credit hours in Discipline One of which at least 3 credit hours must be at the 4000 level
  - ii. At least 12 credit hours in Discipline Two
- c. Six credit hours in each of the remaining five disciplines in Group A for a total of 30 credit hours
- d. At least 12 credit hours in Humanities Core must be at the 3000 level

##### Group A:

Humanities  
 Classics  
 English  
 French (or another modern language)\*  
 History  
 Philosophy  
 Religious Studies  
 Fine Arts (Art History and Theatre 1000, 1001)

\* Subject to approval by the Chair of Humanities

#### 2. Social Sciences Requirement

Students must complete 12 credit hours in disciplines chosen from Group B below. At least 6 credit hours must be beyond the 1000 level.

##### Group B:

Social Sciences  
 Anthropology  
 Business  
 Economics  
 Folklore  
 Geography  
 Political Science  
 Psychology  
 Sociology  
 Women's Studies  
 Environmental Studies

### 6.4 Minor Programs - Division of Arts

All minor programs require 24 credit hours

#### 1. Classics Minor:

- a. Classics 1100 and 1200
- b. Classics 2035 and 2040



- c. Three credit hours at 3000 level
  - d. Nine additional credit hours in Classics
2. **English Minor:**
- a. Six credit hours at 1000 level in English
  - b. Six credit hours chosen from English 2005, 2006 and 2007
  - c. Three credit hours chosen from English 3205 or 3206
  - d. Nine additional credit hours in English electives; 3 credit hours must be chosen from courses having an initial digit "3" or "4"
3. **Historical Studies Minor:**
- a. History 1100 and 1101
  - b. History 3840
  - c. Three credit hours at 3000 level in History
  - d. Three credit hours at 4000 level in History
  - e. Additional 9 credit hours in History
4. **Humanities Minor:**
- a. Humanities 3000 and 4000
  - b. Nine credit hours in each of two disciplines from the following list:
    - Classics
    - English (not including first-year offerings)
    - Fine Arts (Art History, Theatre 1000, 1001)
    - French (or another modern language approved by Program Chair of Humanities)
    - Philosophy
    - History
    - Religious Studies
5. **Philosophy Minor:**
- a. Philosophy 2701 and 2702
  - b. Three credit hours from following list: Philosophy 3730, 3740, 3800, 3840, 3850, 3860
  - c. 15 additional credit hours in Philosophy
6. **Religious Studies Minor:**
- 24 credit hours in Religious Studies with no more than 6 credit hours at 1000 level and at least 9 credit hours at 3000 level or above.

## 7 Division of Social Science

Bachelor of Arts (General) degrees are available with Majors in Environmental Studies, Psychology, Social/Cultural Studies, and Tourism Studies. Bachelor of Arts (Honours) degree is available in Psychology.

Bachelor of Science (General and Honours) degrees are available in Psychology.

Minors are available in Business, Canadian Studies, Environmental Studies, Folklore, Geography, Psychology, Social/Cultural Studies, Sociology.

An articulation agreement has been established with the College of the North Atlantic for graduates of the two-year Adventure Tourism Diploma Program who wish to obtain a Bachelor of Arts degree (Major in Environmental Studies).

### 7.1 Major in Environmental Studies

Program Chair: D. Carroll

The Major consists of an Environmental Studies Core which provides a broad appreciation of interrelationships inherent in any study of the environment and one of two possible concentrations which provides the depth and focus for the degree program.

1. **Environmental Studies Core**

Students must complete the following courses:

- Economics 2010
- Environmental Studies 1000
- Environmental Studies 2000
- Environmental Studies 3000
- Environmental Studies 3001
- Environmental Studies 4010
- Environmental Studies 4950
- Geography 1000
- Geography 3222
- Philosophy 2809

2. **Environmental Studies Concentrations**

Students must complete 42 credit hours in one of the following concentrations:

a. **Environmental Perspectives Concentration**

Forty-two credit hours at least 15 of which must be at the 3000 or 4000 level:

- Anthropology 3080
- Anthropology 3083
- Biology 1001 and 1002
- Biology 2041
- Biology 2600
- Chemistry 1001
- Chemistry 1200
- Earth Sciences 1000
- Earth Sciences 1002

Environmental Science 2261  
 Environmental Science 2360  
 Environmental Science 2370  
 Environmental Science 2371  
 Environmental Studies 3010-3029  
 Environmental Studies 4000  
 Folklore 2401  
 Folklore 2600  
 Forestry 1010 and 1011  
 Geography 1001  
 Geography 2001  
 Geography 2102  
 Geography 2302  
 Geography 2425  
 Political Science 3550  
 Political Science 3731  
 Religious Studies 3880  
 Sociology 2120  
 Geography 4405

**b. Outdoor Environmental Pursuits Concentration**

- i. Environmental Studies 2210, Environmental Studies 2220, Environmental Studies 3210, Human Kinetics and Recreation (HKR) 3555, and Human Kinetics and Recreation (HKR) 4555
- ii. Twenty-seven credit hours from the following of which at least 9 credit hours must be at the 3000 or 4000 level:
  - Anthropology 3083
  - Biology 1001 and 1002
  - Biology 2041
  - Biology 2600
  - Chemistry 1001
  - Chemistry 1200
  - Earth Sciences 1000
  - Earth Sciences 1002
  - Environmental Science 2261
  - Environmental Science 2360
  - Environmental Science 2370
  - Environmental Science 2371
  - Environmental Studies 4010-4039
  - Environmental Studies 4000
  - Folklore 2600
  - Forestry 1010 and 1011
  - Geography 1001
  - Geography 2102
  - Geography 2425
  - Human Kinetics and Recreation (HKR) 3565
  - Human Kinetics and Recreation 4575
  - Political Science 3731
  - Religious Studies 3880

## 7.2 Major in Psychology - B.A. and B.Sc.

Program Chair: Dr. S. Wright

The Major in Psychology consists of a minimum of 45 credit hours in Psychology as follows:

1. Psychology 1000, 1001, 2925, 2950, 3950, 4910, 4925, and one of 4950 or 4951
2. At least 12 credit hours from: Psychology 2025, 2125, 2225, 2425, 2625, 2825
3. At least 9 credit hours chosen from the following Contemporary Issues courses: Psychology 3025, 3125, 3225, 3325, 3425, 3525, 3625, 3626, 3627, 3628, 3725, 3825

Candidates for the Bachelor of Science degree with a Major in Psychology shall also complete an additional 36 credit hours as follows:

1. Six credit hours in Mathematics, which must include Mathematics 1000
2. Biology 1001 and 1002
3. Chemistry 1200 and 1001 OR Physics 1020 (or 1050) and 1021 (or 1051)
4. Nine credit hours at the 2000 level or above (two courses must be laboratory courses) in ONE of the following subjects: Biochemistry, Biology, Chemistry, Earth Science, Environmental Science, Physics
5. Nine additional credit hours chosen in any combination from the following subjects: Biochemistry, Biology, Chemistry, Computer Science, Earth Science, Environmental Science, Mathematics, Physics, Statistics

- Notes:
1. 2925. *Research Methods and Data Analysis in Psychology I* has the following Mathematics prerequisites - Mathematics 1000 or any two of the following courses: Mathematics 1090, 1050, 1051.
  2. 2925. *Research Methods and Data Analysis in Psychology I* is a prerequisite for 2950, *Research Methods and Data Analysis II*, and for all 3000 and 4000 level Psychology courses.
  3. Some Psychology courses require regular laboratory classes. Others may require the completion of research, study projects or field projects.

### 7.2.1 Requirements for Honours in Psychology

The Honours B.A. and B.Sc. degrees in Psychology offer greater concentration in the discipline and also require a higher level of academic achievement than is required for the completion of a degree. The Honours degrees in Psychology at Sir Wilfred Grenfell College are 120 credit hour programs normally requiring four years for completion (See regulations for the Honours degree of Bachelor of Arts and Bachelor of Science at Sir Wilfred Grenfell College).

The following requirements govern the Bachelor of Arts (Honours) and the Bachelor of Science (Honours) degrees in Psychology:

## 1. Course Requirements

- a. Students must meet the General Regulations for Sir Wilfred Grenfell College Bachelor of Arts or Bachelor of Science degree.
- b. Candidates must also complete:
  - i. Psychology 1000, 1001, 2025, 2125, 2225, 2425, 2625, 2825, 2925, 2950, 3950, 4910, 4925
  - ii. Fifteen credit hours from Psychology 3025, 3125, 3225, 3325, 3425, 3525, 3625, 3626, 3627, 3628, 3725, 3825
  - iii. A two-semester research project, Psychology 4951 and 4959.
- c. Candidates for the Bachelor of Science (Honours) degree in Psychology shall also complete an additional 27 credit hours as follows:
  - i. Six credit hours in Mathematics, which must include Mathematics 1000
  - ii. Biology 1001 and 1002
  - iii. Chemistry 1200 and 1001 OR Physics 1020 (or 1050) and 1021 (or 1051)
  - iv. Nine credit hours at the 2000 level or above (two courses of which must be laboratory courses) in ONE of the following subjects: Biochemistry, Biology, Chemistry, Earth Science, Environmental Science or Physics.

## 2. Honours Thesis

The Honours project sequence (Psychology 4951 and 4959) involves the production of an Honours thesis. This thesis will be evaluated by the thesis supervisor and an additional faculty member selected by mutual consent of the candidate and the supervisor.

## 7.3 Major in Social/Cultural Studies

Program Chair: Dr. D. Klassen

The Major consists of 78 credit hours as follows:

Anthropology 1031, 2210, 3140, 3083, 3520

Folklore 1000, 2100, 2230, 2300, 2401

History 1100, 1101

Social/Cultural Studies 4000, 4100, 4950

Sociology 2000, 2120, 3040, 3150, 3314

Eighteen additional credit hours from Sociology and/or Folklore and/or Anthropology

## 7.4 Major in Tourism Studies

### 7.4.1 Admission Modes and Requirements

#### Direct Entry (for High School Students)

Students may apply for admission into the first year of the Bachelor of Arts in Tourism Studies program (BA (TS)) directly from high school by indicating this in the appropriate place on their Undergraduate Application for Admission/Readmission to Memorial University of Newfoundland. Direct entry from high school is subject to the applicant's final acceptance to the University.

#### Advanced Standing (for Current Memorial University of Newfoundland Students)

1. Students may apply for admission with Advanced Standing into the BA (TS) program. A student's placement within the program, and requirements needed to complete the program, will be determined on an individual basis at the time of admission. Students applying for admission with advanced standing must complete and submit the Application for Admission to the Chair of the Tourism Studies program. The deadline for submission of applications for consideration of admission is March 1 for Fall admission.
2. Admission with Advanced Standing is limited and competitive. The primary criterion used in reaching decisions on applications for admission with advanced standing is overall academic achievement. Selection, therefore, will be based on a student's overall academic performance.

#### Transfers From Other Post-Secondary Institutions

1. Students who are transferring from other universities must apply for admission to the University on or before the deadlines specified in the University Diary for the semester in which they intend to begin their program, to allow sufficient time for the evaluation of transfer credits. The acceptance of transfer students into the BA (TS) program is subject to the same conditions outlined under Advanced Standing (for Current Memorial University of Newfoundland Students) above.
2. Subject to item 2. under **Advanced Standing (for Current Memorial University of Newfoundland Students)** above, graduates of a three year community college tourism-related diploma program may also be considered for admission with advanced standing into the BA (TS) program. Specific course requirements will be determined on an individual basis at the time of admission.

Students may apply for admission with Advanced Standing into the BA (TS) program beyond Year 1.

#### Regulations for a Major in Tourism Studies

The Major consists of a Tourism core which provides a broad appreciation of the implications of tourism activity in the context of social, cultural and physical environments.

The Tourism Studies program requires a total of 120 credit hours.

1. Students must successfully complete 60 credit hours as follows:
  - a. French 1501 and 1502
  - b. Economics 2010 and 2020
  - c. Business 1000;
  - d. three credit hours chosen from Geography 3222, Psychology 2925, Sociology 3040, Statistics 2500, Statistics 2550
  - e. Thirty-three credit hours in Tourism consisting of Tourism Studies 1000, 1100, 2000, 2201, 3100, 3240, 3800, 3900, 4010, 3 credit hours from 4900-4910, and 4950.
  - f. Three additional credit hours in Tourism Studies electives taken at the 2000 level.
  - g. Six additional credit hours in Tourism Studies electives taken at the 3000 or 4000 levels.
2. A minimum of 24 credit hours in an approved minor concentration area other than that of the Major.
3. Courses to make up the total of 120 credit hours, other than those required for the core program. Of these courses, not more than 6

credit hours shall be from courses in the Tourism Studies program.

## 7.5 Minor Programs - Division of Social Science

Minor programs require 24 credit hours

### 1. Business Minor:

- a. Students who are completing degrees in the Faculties of Arts and/or Science may complete a minor in Business Administration.
- b. Students who wish to undertake the Business minor program must have completed a minimum of ten courses. Application is made in the space provided on the Change of Academic Program Form, which must then be approved by the Dean of the Faculty of Business Administration, or delegate [The Dean's delegate at Sir Wilfred Grenfell College is the Division Head, Social Science]. Admission into the minor program is selective: at the time of application a student must have a cumulative average of at least 65%.
- c. A minor in Business Administration shall consist of 24 credit hours comprising the following courses: Business 1000, 1101, 1201, 2301, 4000, 4500, and two courses chosen from Business 1600, 2101, 2201, 3101, 3320, 3700, and 4320.
- d. Course prerequisites to all Business courses shall apply to a Business minor. Students should note, for example, that the prerequisites for Business 4500 are Business 1101, Statistics 2500 and Economics 2010. It should be noted that some courses are not offered every semester.

### 2. Minor in Canadian Studies

A Minor in Canadian Studies shall consist of 24 credit hours as follows:

- a. Fifteen credit hours in courses on the following list from at least four different disciplines:

English 2146  
 English 2156  
 French 1502  
 French 2601  
 French 2602  
 History 2200  
 History 2210  
 Political Science 1010  
 Political Science 2710  
 Political Science 2711  
 Sociology/Anthropology 2240

- b. Nine additional credit hours in courses on the following list from at least two different disciplines:

Art History 3710  
 Art History 3711  
 English 3145  
 English 3147  
 English 3148  
 English 3149  
 English 4307  
 English 4825-35  
 Folklore 4300  
 History 2120  
 History 3520/Anthropology 3520  
 History 3525/Anthropology 3525  
 History 4254  
 Political Science 3731  
 Sociology 3395

### 3. Environmental Studies Minor:

- a. Environmental Studies 1000 and 9 credit hours from those designated as Environmental Studies core courses
- b. Twelve credit hours from one of the Environmental Studies concentrations or a combination of courses taken from both concentrations. The courses chosen must be chosen from at least three subject areas.

### 4. Folklore Minor:

- a. Folklore 1000, 2100, 2300, 2401, 2500
- b. Nine additional credit hours in Folklore

### 5. Geography Minor:

- a. Geography 1000, 1001, 2001, 2102, 3222
- b. Nine additional credit hours in Geography; at least 6 credit hours of which must be at the 3000 or 4000 level.

### 6. Psychology Minor:

- a. Psychology 1000, 1001, 2925
- b. Nine credit hours in Psychology at the 2000 level
- c. Six credit hours in Psychology at the 3000 level

### 7. Social/Cultural Studies Minor:

- a. Anthropology 1031, Sociology 2000, Folklore 1000
- b. Anthropology 2410 or Sociology 3150
- c. Folklore 2100 or Sociology 3040
- d. Three additional credit hours in each of Sociology, Anthropology and Folklore

### 8. Sociology Minor:

- a. Sociology 2000, 3040, 3150
- b. Fifteen credit hours in Sociology; at least 6 credit hours must be at the 3000 or 4000 level

**9. Regulations for a Minor in Tourism Studies**

- a. Students who are completing degrees in Arts, Science, and/or Business Administration may complete a minor in Tourism Studies.
- b. Students who wish to undertake the Tourism Studies minor program must have completed a minimum of 18 credit hours. Application is made in the space provided on the Change of Academic Program Form, which must then be approved by the Chair of the Tourism Studies program. Admission into the minor program is limited and competitive.
- c. A minor in Tourism shall consist of 24 credit hours comprising the following courses: Tourism 1000, 1100, 2000, 3100, 3900, 3 credit hours chosen from a 2000-level or 3000-level Tourism elective, 3 credit hours chosen from a 4000-level Tourism course, and three credit hours chosen from Geography 3222, Psychology 2925, Sociology 3040, Statistics 2500, Statistics 2550.
- d. Course prerequisites to all Tourism courses shall apply to a Tourism Studies minor.

**10. Regulations for an Advanced Diploma in Tourism Studies**

The Advanced Diploma in Tourism Studies is designed for individuals already possessing a post-secondary diploma or degree in any relevant field who wish to acquire the knowledge and skills required to work in today's tourism industries. The program will benefit individuals from a wide variety of backgrounds including, Business, Environmental Science, Environmental Studies, Fine Arts, Historical Studies, Social/Cultural Studies, and Sustainable Resource Management (proposed).

- a. Students who wish to undertake the Advanced Diploma in Tourism Studies must have completed a post-secondary diploma or degree in any field, or possess at least five years of full-time, relevant work experience or equivalent. Application is made in the space provided on the Change of Academic Program Form, which must then be approved by the Chair of the Tourism Studies Program. Admission into this program is limited and competitive.
- b. The Advanced Diploma in Tourism Studies shall consist of 30 credit hours comprising the following courses: Tourism 1000, 1100, 2000, 3100, 3900, 12 credit hours chosen from a 2000-level or 3000-level Tourism electives, and 3 credit hours chosen from a 4000-level Tourism course.
- c. Prerequisites for all Tourism courses may be waived after consultation with, and permission of, the Chair of the Tourism Studies program.

**7.6 Articulation Agreement With the College of the North Atlantic****7.6.1 For Graduates of the Two-Year Adventure Tourism Diploma Program**

Students who have graduated from the two-year Adventure Tourism Diploma Program offered by the College of the North Atlantic, Corner Brook Campus, or who are in their final semester of this program, can apply for entry with advanced standing into the Environmental Studies Degree Program offered by Sir Wilfred Grenfell College.

Students who are entering the Environmental Studies Program will be given a total of 60 credit hours towards the 120 credit-hour degree program. Of the 60 credit hours, students taking the Outdoor Environmental Pursuits Concentration will receive credit for EVST 2210, EVST 2220, EVST 3210, HKR 3555, and HKR 4555 as well as 18 unspecified credit hours towards the concentration requirements. Of the 60 credit hours, students taking the Environmental Perspectives Concentration will receive 21 unspecified credit hours towards the concentration requirements.

Students will receive 3 credit hours for unspecified writing courses, 6 unspecified credit hours towards the Group B and 6 credit hours towards Group C breadth of knowledge requirement. The remaining credit hours will be deemed to be unspecified electives.

In addition to the general requirements for the Sir Wilfred Grenfell College B.A. degree, students will be required to complete the following requirements for the Environmental Studies major:

**Environmental Studies Core**

Economics 2010  
 Environmental Studies 2000  
 Environmental Studies 3000  
 Environmental Studies 3001  
 Environmental Studies 4010  
 Environmental Studies 4950  
 Geography 2220  
 Philosophy 2809

**Additional Requirements Based on Concentration****For Students taking the Outdoor Environmental Pursuits Option:**

Fifteen credit hours of the following courses of which at least 9 credit hours must be at the 3000 or 4000 level:

Anthropology 3083  
 Biology 1001 and 1002  
 Biology 2041  
 Biology 2600  
 Chemistry 1001  
 Chemistry 1200  
 Earth Sciences 1000  
 Earth Sciences 1002  
 Environmental Science 2261  
 Environmental Science 2360  
 Environmental Science 2370  
 Environmental Studies 3010-3029  
 Environmental Studies 4000  
 Folklore 2600  
 Forestry 1010 and 1011  
 Geography 1001  
 Geography 2102  
 Geography 3325  
 Political Science 3731  
 Religious Studies 3880

**For Students taking the Environmental Perspectives Concentration:**

27 credit hours of the following courses of which 18 must be at the 3000 or 4000 level:

Anthropology 3080  
 Anthropology 3083  
 Biology 1001 and 1002  
 Biology 2041  
 Biology 2600  
 Chemistry 1001  
 Chemistry 1200  
 Earth Sciences 1000  
 Earth Sciences 1002  
 Environmental Science 2261  
 Environmental Science 2360  
 Environmental Science 2370  
 Environmental Science 2371  
 Environmental Studies 3010-3029  
 Environmental Studies 4000  
 Folklore 2401  
 Folklore 2600  
 Forestry 1010 and 1011  
 Geography 1001  
 Geography 2001  
 Geography 2102  
 Geography 2302  
 Geography 3325  
 Political Science 3550  
 Political Science 3731  
 Religious Studies 3880  
 Sociology 2120

Note: The required Philosophy 2809 and the optional Religious Studies 3550 can be used to fulfill the Group A breadth of knowledge requirement. The required Environmental Studies core courses will fulfil the Quantitative Reasoning and Analysis requirement.

## 8 Division of Science

Bachelor of Science (General and Honours) degrees are available in Environmental Science, General Science and Psychology.

Minors are available in Environmental Science, Mathematics, Science.

An articulation agreement has been established with the College of the North Atlantic for those students who have completed the three-year Environmental Technology diploma program and who wish to obtain a Bachelor of Science degree (Major in Environmental Science).

A memorandum of understanding has been established with the University of New Brunswick whereby students can complete the first two years of the University of New Brunswick's Bachelor of Science program in Forestry at Sir Wilfred Grenfell College.

### 8.1 Major in Environmental Science

Program Chair: Dr. Christine Campbell

The Major consists of an Environmental Science Core which provides a broad appreciation of the interrelationships inherent in any study of the environment and one of two possible streams which provide the depth and focus for the degree program.

#### 1. Environmental Science Core

The student must complete at least 45 credit hours as follows:

- a. Biology 1001, 1002, 2600  
 Earth Science 1000  
 Mathematics 1000\* (or 1080 and 1081), Math 2550 or equivalent  
 One of Physics 1020\* or 1050\* and one of Physics 1021\* or 1051\*  
 Environmental Science 4000  
 Environmental Science 4950 (or 4951, see Honours section)
- b. At least two of:
  - Anthropology 3083
  - Economics 2010
  - Environmental Studies 3000
  - Philosophy 2809
  - Political Science 3550
  - Political Science 3731
  - Religious Studies 3880
- c. At least three of:
  - Environmental Science 2261
  - Environmental Science 2360
  - Environmental Science 2370
  - Environmental Science 2371
  - Environmental Science 2430
  - Environmental Science 2450
  - Environmental Science 3072
  - Environmental Science 3470
  - Environmental Studies 2000

\*It is strongly recommended that students considering the Chemistry stream of the Environmental Science Program complete asterisked courses in their first year.

#### 2. Environmental Science Streams

Students must complete at least 39 credit hours in one of the following streams:

**a. Biology stream**

Biology 2010, 2122

Chemistry 1200/1001 sequence or Chemistry 1011/1031 sequence or Chemistry 1050/1051 sequence, and one of Chemistry 2210 or 2300 or 2440 or 2400/2401 sequence, or Chemistry 1010/1011 sequence and Chemistry 2440

Envs 3110, 3130 3131, 4132, 4140 (or equivalent field course)

Two of Envs 4069, 4131, 4133, 4240, 4479

one additional laboratory (Science/Statistics/GIS) course beyond the first year level excluding Environmental Science Core courses. A course used to fulfill a stream requirement cannot also be used as a Group c. course in the Environmental Science Core.

**b. Chemistry stream**

Chemistry 1200/1001\* sequence or Chemistry 1011/1031\* sequence or Chemistry 1050/1051\* sequence.

Chemistry 2210, 2300 and 2400/2401 or equivalent

Environmental Science 2261, 3210, 3211, 3260, 3261, 4230

Two of Environmental Science 4069, 4131, 4240, 4249, 4479

Mathematics 1001

Note: *It is strongly recommended that students complete one of the sequences of Chemistry courses marked with an asterisk in their first year. Students in the Chemistry stream should also complete Mathematics 1001 in their first year.*

**8.2 Requirements for Honours in Environmental Science (B.Sc.)**

The Bachelor of Science (Honours) degree in Environmental Science offers greater concentration in the discipline and also requires a higher level of academic achievement than is required for completion of the general degree. The Bachelor of Science (Honours) in Environmental Science at Sir Wilfred Grenfell College is a 120 credit hour program normally requiring four years for completion. (See regulations for a Honours degree in Arts and Science at Sir Wilfred Grenfell College.) The following requirements govern the Bachelor of Science (Honours) in Environmental Science:

**1. Course Requirements**

- a. Students must meet the General Regulations for Sir Wilfred Grenfell College Bachelor of Science degree.
- b. Candidates must also complete:
  - i. the Environmental Science Core requirements
  - ii. the course requirements of a specific stream
- c. Candidates must complete 3 additional credit hours in courses at the 4000 level. These courses normally will be drawn from the candidates's honours stream as follows:
  - i. For the Honours Bachelor of Science in Environmental Science (Biology), a further course chosen from: Environmental Science 4069, 4131, 4133, 4240, 4479
  - ii. For the Honours Bachelor of Science in Environmental Science (Chemistry), a further course chosen from: Environmental Science 4069, 4131, 4240, 4249, 4479
- d. Students, in close consultation with a faculty advisor and the agreement of the Chair of the Program, may select fourth-year honours requirement courses in place of those required in Section 1.c. (above), so long as such selections are consistent with the Major to which they are added. Such honours selections will be subject to approval by the Academic Studies committee.
- e. Honours graduates of the Environmental Science Program will have also completed a two-semester research project consisting of a research proposal and literature review course (Environmental Science 4951) and a research project course (Environmental Science 4959).

**2. Honours Dissertation**

The honours project sequence (Environmental Science 4951 and 4959) involves the production of an honours dissertation. This dissertation will be evaluated by a three member committee that includes the dissertation supervisor(s) and that is approved by the Environmental Science faculty unit.

**3. Academic Standing**

In order to graduate with an Honours degree, the candidate must satisfy the regulations regarding academic standing as specified under Regulations for Honours degree of Bachelor of Science at Sir Wilfred Grenfell College.

Courses used to calculate the academic standing as outlined in the General Regulations for an Honours Degree at Sir Wilfred Grenfell College include all required Environmental Science and Chemistry courses for the Chemistry stream students and all required Environmental Science and Biology courses for the Biology stream students, excluding, in both cases, 1000 level courses.

More specifically, courses normally used for calculations would be:

**Biology stream:**

Biology 2010, 2122, 2600

Three of: Environmental Science 2261, 2360, 2370, 2371, 2430, 2450, 3072, 3470, or Environmental Studies 2000

Environmental Science 3110, 3130, 3131, 4132, 4140 (or equivalent)

Three of: Environmental Science 4069, 4131, 4133, 4240, 4479

Environmental Science 4000, 4951, 4959

**Chemistry stream:**

Chemistry 2210, 2300, 2400, 2401

Two of: Environmental Science 2360, 2370, 2371, 2430, 2450, 3072, 3470, or Environmental Studies 2000.

Environmental Science 2261, 3210, 3211, 3260, 3261, 4230

Three of: Environmental Science 4069, 4131, 4240, 4249, 4479

Environmental Science 4000, 4951, 4959

Students will normally not be allowed to repeat courses to fulfil the academic standing criteria for the Bachelor of Science (Honours) in Environmental Science.

Note: *For students completing an Honours degree in "open" programs the appropriate courses to be used in calculation of academic standing will be determined by the program unit and will be approved by the Academic Studies Committee.*

**8.3 Major in General Science**

Program Chair: Dr. Georg Gunther

Students completing the Major in General Science will complete a General Science Core. In addition, they will complete a minimum of 24 credit hours (or 18 credit hours in the case of Mathematics) in each of three streams chosen from Biology, Chemistry, Earth Systems, Mathematics or Physics. The allowable courses that can be chosen from each stream are listed below.

#### 1. General Science Core

Students must complete:

##### a. Course Requirements

Mathematics 1000, 1001

Science 4000 (General Science Seminar)

##### b. Independent Project

Science 4950

#### 2. General Science Streams

Students must complete at least 24 credit hours in each of three streams, chosen from the following list of courses:

##### Biology:

Biology 1001, 1002

Eighteen credit hours from Biology 2010, 2122, 2210, 2250, 2600, Environmental Science 3072, 3110, 3130, 3131, 4104 (or equivalent field course) where at least 6 credit hours must be beyond the 2000 level.

##### Chemistry:

Chemistry 1001, 1200, 2210, 2300

Either Chemistry 2440 or both 2400 and 2401

Students who have completed Chemistry 2440 must complete another 9 credit hours from Environmental Science 2261, 3210, 3211, 3261, 4230, 4240; students who have completed Chemistry 2401 must complete another 6 credit hours from Environmental Science 3210, 3211, 3260, 3261, 4230, 4240.

##### Earth Systems:

Earth Science 1000, 1001 or 1002

Any 18 credit hours (six courses) from the following list, at least two courses of which are beyond the 2000 level: Environmental Studies 2000, 3001, Environmental Science 2360, 2370, 2371, 2450, 3072, 3470, 4069, 4479, Earth Science 3811.

##### Mathematics:

Mathematics 1000, 1001, 2000, 2050, 2050, Pure Mathematics 2320

Nine additional credit hours beyond the 1000 level chosen from Applied Mathematics, Mathematics, Pure Mathematics or Statistics, at least 6 of which must be beyond the 2000 level.

##### Physics:

Physics 1050, 1051, 2056, 2065, 3060, 3220

Two of Physics 2151, 3160, Earth Science 2150, Environmental Science 2430, 2450, 3470, 4479

Notes: 1. A student may not use the same course to satisfy the requirements of more than one stream.

2. Students planning their course selection should be aware of the fact that most senior level science courses have one or more specified prerequisites.

## 8.4 Requirements for Honours in the General Science Degree

The Bachelor of Science (Honours) degree in General Science requires students to gain greater depth in one or more of their three chosen streams. It also requires a higher level of academic achievement than is required for the general degree. The Bachelor of Science (Honours) in General Science is a 120 credit hour program normally requiring four years for completion (see regulations for an Honours degree in Arts and Science at Sir Wilfred Grenfell College). The following requirements govern the Bachelor of Science (Honours) in General Science:

#### 1. Course Requirements

##### a. General Science Core:

Students must complete all of the course requirements of the General Science Core.

##### b. General Science Streams:

In addition to the courses required under the General Degree regulations, students must complete two additional courses from at least one of their three chosen streams. These additional courses must come from the list of courses given in the stream requirements, and must both be beyond the 2000 level.

#### 2. Honours Dissertation:

For students doing Honours, the Independent Project Science 4950 will be replaced by a two-semester Honours Project, Science 4951/Science 4959.

#### 3. Academic Standing:

In order to graduate with an Honours degree, a student must satisfy the regulations regarding academic standing as specified under Regulations for Honours degree of Bachelor of Science at Sir Wilfred Grenfell College. Courses used to calculate the academic standing as outlined in the General Regulations for an Honours Degree at Sir Wilfred Grenfell College include all courses listed in the stream requirements, with the exception of all 1000 level courses.

## 8.5 Minor Programs - Division of Science

### Environmental Science Minor:

Students may choose one of the following three options:

#### 1. Environmental Science

a. Biology 1001, 1002 and 2600 or Chemistry 1200, 1001, and one of Chemistry 2440 or Environmental Science 2261

b. Additional 15 credit hours in science courses within the Environmental Science program of which at least 6 credit hours must be at the 3000 or 4000 level

#### 2. Environmental Science-Biology

a. Biology 1001, 1002, 2010, 2122, 2600

b. Three credit hours from Environmental Science 3110, 3130, 3131, 4131



- c. An additional 6 credit hours in courses with the Environmental Science designation of which at least 3 credit hours must be at the 3000 or 4000 level.
- 3. Environmental Science-Chemistry
  - a. Chemistry 1200, 1001, 2210, 2300, 2440
  - b. Three credit hours from Environmental Science 3210, 3261, 4240
  - c. An additional 6 credit hours in courses with the Environmental Science designation of which at least 3 credit hours must be at the 3000 or 4000 level

**Mathematics Minor:**

- 1. Mathematics 1000, 1001 (The only other course at the 1000 level which carries credit toward a Minor in Mathematics is Computer Science 1700.)
- 2. 18 additional credit hours in Mathematics, Pure Mathematics, and Applied Mathematics courses beyond 1000 level or 15 additional credit hours Mathematics, Pure Mathematics, and Applied Mathematics courses beyond 1000 level and 3 credit hours in Statistics or Computer Science courses.

At least 6 credit hours will be in courses at the 3000 level or higher.

**Science Minor:**

- 1. Mathematics 1000
- 2. Six additional credit hours in first year science courses (At least 3 credit hours must be in a laboratory course chosen from any science discipline except mathematics).
- 3. Five science courses beyond the 1000 level, at least 6 credit hours of which must be beyond the 2000 level. (Mathematics 1001 may be substituted for one of the 2000 level science courses).

Note: *Students pursuing the Minor in Science may choose courses from the following disciplines: Biology, Chemistry, Computer Science, Earth Science, Environmental Science, Mathematics, Physics, Science, and Statistics. Students who have completed courses drawn from other Science disciplines must obtain approval of the Head of Science.*

## 8.6 Articulation Agreement With the College of the North Atlantic

### 8.6.1 For Graduates of the Three-Year Environmental Technology Diploma Program

Students who have graduated from the three-year Environmental Technology Diploma Program offered by the College of the North Atlantic, or who are in their final semester of this program, can apply for entry with advanced standing into the Environmental Science Degree Program offered at Sir Wilfred Grenfell College. Upon admission to the university, such students will enter the second year of either stream of the Environmental Science Degree Program.

They will be given unspecified credit for 45 credit hours towards the 120 credit-hour degree program. Included in these 45 credit hours will be 9 credit hours for unspecified writing courses, of which 6 credit hours will be at the 1000 level and three will be at the 2000 level. In addition, 6 of these credit hours will be for unspecified credit at the 2000 level satisfying Group B, breadth of knowledge requirement.

Students gaining entry into the Environmental Science Degree Program at Sir Wilfred Grenfell College will need to satisfy all other core program requirements specified for Grenfell degree programs. As well, they will need to satisfy all other course requirements specified for their specific stream in Environmental Science.

Upon admission into the second year of the Environmental Science Degree Program, students will be required to complete the following:

**Core Program Requirements:**

Six credit hours from Group A Breadth of Knowledge Requirement

21 credit hours in additional designated Writing (W) courses which may include Environmental Science core and stream courses

**Environmental Science Core:**

Biology 2600 (W)

Environmental Science 4000 (W)

Environmental Science 4950 (W) (students who intend to complete the honours option will complete Environmental Science 4951 (W) and Environmental Science 4959 (W))

Statistics 2550 or equivalent

1. **At least two of:**

- Anthropology 3083
- Economics 2010
- Environmental Studies 3000
- Philosophy 2809 (W)
- Political Science 3731, 3550
- Religious Studies 3880 (W)

2. **At least three of:**

- Environmental Science 2261, 2360, 2370(W), 2371(W), 2430, 2450, 3072, 3470
- Environmental Studies 2000 or equivalent

**Biology Stream:**

Biology 2010, 2122 (W)

Chemistry 2300 or 2440 or 2400/2401

Environmental Science 3110, 3130, 3131, 4132, 4140 (or an equivalent field course)

Six credit hours from Environmental Science 4069, 4131, 4133, 4240, 4479 (Honours students must complete 9 credit hours from this list)

Three credit hours in an additional science or statistics laboratory course at the 2000 level or higher, excluding Environmental Science core courses

**Chemistry Stream:**

Chemistry 2210(W), 2300, 2400, 2401

Environmental Science 2261, 3210(W), 3211(W), 3260, 3261, 4230

Six credit hours from Environmental Science 4069, 4131, 4240, 4249, 4479 (Honours students must complete 9 credit hours from this list)

## 8.7 Forestry

Under the terms of a Memorandum of Understanding (MOU) between Sir Wilfred Grenfell College and the University of New Brunswick, students are able to complete the first two years of UNB's Bachelor of Science program in Forestry at Sir Wilfred Grenfell College. Once they have successfully completed the courses required by this MOU, students will be permitted entry into the third year of UNB's five-year degree program. For more specific details about this program, contact the College Registrar, Sir Wilfred Grenfell College, Corner Brook, Newfoundland and Labrador, A2H 6P9.

The MOU stipulates that students must complete the following courses before being admitted into the third year of UNB's program:

Biology 1001, 1002, 2010  
 Chemistry 1200, 1001 (or equivalent)  
 Mathematics 1000, 2050  
 Computer Science 1700  
 Statistics 2550  
 Earth Science 1000  
 Forestry 1001, 1010, 1011, 1900, 2001, 2221, 2222, 2223, 2224, 2225

Note: *Forestry 1001, 2001 are five-day field camps that will be completed in late August, prior to the start of the Fall semester.*

For detailed information about the UNB program, contact the Assistant Dean, Faculty of Forestry, University of New Brunswick, Fredericton, New Brunswick, E3B 6C5.

## 9 Division of Fine Arts

Bachelor of Fine Arts degrees are available in Theatre and in Visual Arts.

Note: *Students completing a Fine Arts degree are **not** required to follow the Sir Wilfred Grenfell College Core program requirements.*

Minor Program is available in Art History

### 9.1 Bachelor of Fine Arts (Theatre)

The Bachelor of Fine Arts (Theatre) program is designed to educate and train the student in the history, theory and practice of the theatre arts. The degree provides an undergraduate training, delivered by theatre professionals, that will prepare students to enter a professional graduate school of theatre, theatre conservatory or an apprenticeship in the theatre profession. The degree also provides a broad liberal arts education with a strong component of dramatic literature, enabling the graduate to pursue a variety of careers outside the theatre profession.

In recognition of the relative isolation of the Sir Wilfred Grenfell Campus and the need for students of the performing arts to be exposed to examples of excellence in their field of study, provision will be made for students in their senior years to visit major theatre centres outside the province (e.g. the Harlow Campus will be utilized for studies in London and Stratford).

#### 9.1.1 Admission Requirements

##### 1. Academic Requirements

Applicants must meet the general admission requirements of the University.

##### 2. Audition

In addition to meeting the general admission requirements of the University, applicants for the Bachelor of Fine Arts (Theatre) must undergo an audition/interview to the satisfaction of the department. Enrollment in the Bachelor of Fine Arts (Theatre) is limited and selection is competitive.

3. The deadline for submission of Theatre application forms is April 30th of the year in which admission is sought.

#### 9.1.2 Academic Performance

- Attendance and participation in all studio courses and production rehearsals is vital to the collaborative nature of the program of study in Theatre. Absence from classes or rehearsals of any one student could jeopardize a production, the proper dissemination of practical skills and the overall safety of the students. Therefore attendance at all studio classes, rehearsals and crew calls will be compulsory.
- Students who fail a studio course shall not take more advanced courses in that discipline until the failed course has been satisfactorily completed.
- Students shall complete all 1000 level Theatre courses before advancing to any 2000 level Theatre course.
- A candidate whose average in the Theatre courses for the BFA degree falls below 65 percent in any semester will be placed on probation within the program. A student placed on probation at the end of the final semester of the Theatre program will not be recommended for graduation.
- A candidate will be required to withdraw from the program if the candidate's average in Theatre courses falls below 65 percent in each of two consecutive semesters of his/her enrollment in the program.
- Candidates who have withdrawn or who have been required to withdraw from the Bachelor of Fine Arts (Theatre) program and wish to re-enter the program must re-apply in competition after a lapse of two semesters by April 30 for the upcoming Fall semester, or by August 30 for the upcoming Winter semester.
- Candidates who have been required to withdraw twice from the Bachelor of Fine Arts (Theatre) program shall be ineligible for further admission.
- The Bachelor of Fine Arts (Theatre) program is intended for full-time students only. Students will be expected to take the full course load as prescribed each semester and so progress through the degree in clearly defined blocks of courses. A student failing to take the full number of courses in a given semester would seriously jeopardize his/her ability to complete the degree.

#### 9.1.3 Degree Regulations

To be awarded the Bachelor of Fine Arts (Theatre) a student shall successfully complete 120 credit hours which would normally be completed over a four-year period and must be chosen in accordance with the following pattern:

- English 1000 and 1001 or equivalent
- Visual Arts 2700 and 2701

3. Eighteen credit hours in dramatic literature as follows:  
 English 2350 and 2351 (Surveys of major dramatic texts)  
 English 3205 or 3200 or 3201 (Shakespeare)  
 English 3275 (Modern Drama)  
 Two Dramatic Literature courses to be selected from the following: English 3021, 3022, 3156, 3171, 3181, 3206, 3260, 4210, 4211, 4301, 4305, 4307, 4308, 4316, 4317
4. Fifteen credit hours in academic elective courses
5. Seventy-five credit hours in Theatre chosen in accordance with the following pattern:
6. Theatre 1000, 1001, 1010, 1020, 4030, 4040, and 4001 (Harlow Institute - 10 credit hours) and
7. Forty-seven credit hours in one of the following Majors:
- Acting:**  
 Theatre 1110, 2010, 2011, 2080, 2081, 3010, 3011, 3070, 3071, 3080, 3081, 4010, 4070, and 4080
- or**
- Stagecraft:**  
 Theatre 1120, 2020, 2021, 2090, 2091, 3020, 3021, 3060, 3061, 3090, 3091, 4020, 4060, and 4090

- Notes: 1. Where circumstances warrant any prerequisite(s) for Theatre courses may be waived by the Head of the Division of Fine Arts.
2. Students in their first year will not be allowed to participate in theatre productions. Exceptions will be made only with the permission of the Head of the Division of Fine Arts, and permission will be given only where a student demonstrates satisfactory performance.
3. Where circumstances warrant, a student in second or third year may be given the opportunity for advanced responsibilities in production with the permission of the Head of the Division of Fine Arts. Permission will be given only where a student demonstrates above average academic performance as well as exceptional theatrical ability.
4. Productions will constitute the designated number of rehearsal hours as described below. However, the final week of rehearsals (technical rehearsals) will include ten hour days on Saturday and Sunday. All performances will take place in the evenings with the possible exceptions of occasional matinees.
5. Any departmental regulations may be waived by the Committee on Undergraduate Studies upon request of the Head of the Division of Fine Arts by the appropriate Committee on Undergraduate Studies.

### 9.1.4 Course Structure for the Bachelor of Fine Arts in Theatre

1st Year	3rd Year
<b>Fall</b> Theatre 1000 Theatre 1010 Theatre 1020 English 1000/1050 Elective	<b>Fall</b> Theatre 3010 or Theatre 3020 Theatre 3060 or Theatre 3070, Theatre 3080 or Theatre 3090 English 3275 Elective
<b>Winter</b> Theatre 1001 Theatre 1110 or Theatre 1120 English 1001/1051 Elective Elective	<b>Winter</b> Theatre 3011 or Theatre 3021 Theatre 3061 or Theatre 3071 Theatre 3081 or Theatre 3091 Dramatic Literature course Elective
2nd Year	4th Year
<b>Fall</b> Theatre 2010 or Theatre 2020 Theatre 2080 or Theatre 2090 English 2350 English 3205 Visual Arts 2700	<b>Fall</b> Theatre 4010 or Theatre 4020 Theatre 4060 or Theatre 4070 Theatre 4080 or Theatre 4090 Theatre 4040 Theatre 4030
<b>Winter</b> Theatre 2011 or Theatre 2021 Theatre 2081 or Theatre 2091 English 2351 Dramatic Literature course Visual Arts 2701	<b>Winter</b> Theatre 4001 (Harlow Institute - 10 credit hours)

## 9.2 Bachelor of Fine Arts (Visual Arts)

The Bachelor of Fine Arts (Visual Arts) degree program is a professional program designed to educate and train the student in the history, theory and practice of the Visual Arts. Courses are offered in Drawing, Painting, Sculpture, Printmaking, Photography, Multi-media, Digital Imaging and Digital Multi-Media, and Art History. The curriculum is devised with the aim of producing well-rounded generalists with a solid grounding in all aspects of the Visual Arts. It illustrates the philosophy that artistic freedom and creative expression require both technical skill and intellectual vision, acquired through a disciplined application of effort and a critical awareness of artistic issues, past and present.

In addition to Studio and Art History courses, the student will take a number of appropriate academic courses from disciplines other than Visual Arts, chosen in consultation with the program chair. It is intended that academic courses be chosen which will enhance the Bachelor of Fine Arts (Visual Arts) program and provide, as far as possible, a broad exposure to the liberal arts. The first year of the program consists of intensive foundation of co-requisite courses in Drawing, Two-Dimensional Design and Three-Dimensional Design in preparation for Introductory studio courses in the second year and intermediate studio courses in the third year. In the fourth year, the 4950/4951 studio courses are conducted as tutorials, that is, students will work independently on projects and confer regularly with instructors.

It is recognized that students in the Bachelor of Fine Arts (Visual Arts) program must have occasional opportunities to view important works of art first-hand. Arrangements will therefore be made where possible for students to visit major art centres.

## 9.2.1 Admission Requirements

### 1. Academic Requirements

Applicants must meet the general admission requirements of the University.

### 2. Portfolio Submission

In addition to meeting the general admission requirements of the University, all applicants will be required to submit a portfolio of previous art work and a completed Visual Arts application form before April 15th of the year in which entry is sought. Although it is assumed that applicants will have had no previous formal training in art, evidence of suitability for study in the visual arts is required. Instructions for the submission of portfolios will be provided by the Fine Arts Division upon request. Enrollment in the Bachelor of Fine Arts (Visual Arts) program is limited and selection is competitive.

### 3. Transfers from other universities/colleges

See **UNIVERSITY REGULATIONS - Admission/Readmission to the University (Undergraduate)**.

- Notes: 1. *The Bachelor of Fine Arts (Visual Arts) program is rigorous and demanding and it is assumed that students will normally be enrolled for full-time study. A student who withdraws from a course may put his/her program in jeopardy or be unable to complete the degree in the normally allotted time.*  
 2. *Where circumstances warrant, any prerequisite(s) or co-requisite(s) for Visual Arts courses may be waived by the Program Chair.*  
 3. *Any Visual Arts regulations may be waived by the Committee on Undergraduate Studies upon request of the Program Chair.*

## 9.2.2 Academic Performance

1. Attendance at all studio courses is considered vital to the program and will be required. It will be used as part of the evaluation.
2. a. Students who fail a course in a studio discipline shall not take more advanced courses in that discipline until the failed course has been satisfactorily completed.  
 b. Students who fail any studio course will be required to repeat that course and obtain a grade of at least 65%.
3. Students must normally complete all 1000 level studio courses before advancing to any 2000 level studio course.
4. A candidate whose average in Visual Arts courses falls below 65% in any semester will be placed on probation by the Visual Arts program.
5. A candidate will be required to withdraw from the program if:
  - a. The candidate's cumulative average in Visual Arts courses required for the program falls below 65%. OR
  - b. The candidate's average in Visual Arts courses falls below 65% in each of two consecutive semesters of enrolment in the program.
6. A candidate will be denied graduation if, at the end of the final semester of the Visual Arts Program:
  - a. The candidate's cumulative average in Visual Arts courses required for the program falls below 65%. OR
  - b. The candidate's term average in Visual Arts courses falls below 65% in each of his/her last two consecutive semesters of enrolment in the program.

A candidate denied graduation for either of these reasons will be permitted to register for Visual Arts courses without a waiting period and re-application, and is not bound by Regulation 8 (below).
7. Students who have voluntarily withdrawn from the Bachelor of Fine Arts (Visual Arts) program and wish to re-enter must re-apply in competition by April 15th for the upcoming Fall semester, or by August 30th for the upcoming Winter semester.
8. Students who have been required to withdraw from the Bachelor of Fine Arts (Visual Arts) program and wish to re-enter must re-apply in competition after a lapse of two semesters by April 15th for the upcoming academic year.
9. Candidates who have been required to withdraw twice from the Bachelor of Fine Arts (Visual Arts) program shall be ineligible for further admission.
10. Students denied promotion with a cumulative average below 60% in Visual Arts courses who are re-admitted to the program will normally be required to repeat all the Visual Arts courses of the term, including all the courses which have been passed (in a semester when the courses are normally offered).
11. Students denied promotion with a cumulative average of at least 60% in Visual Arts courses who are readmitted to the program will be required to repeat the failed Visual Arts courses only (in a semester when such courses are normally offered).

## 9.2.3 Degree Regulations

To be awarded the degree of Bachelor of Fine Arts (Visual Arts) a student shall successfully complete 120 credit hours as follows:

1. Six credit hours in English courses.
2. Eighteen credit hours in academic elective courses chosen from Disciplines other than Visual Arts.
3. Visual Arts 2700, 2701 and an additional 18 credit hours in Art History
4. Visual Arts 100A/B; 110A/B; 120A/B; 2000/2001.
5. Studio Courses

Forty-two credit hours in studio courses as follows:

- a. Three of i., ii., iii., iv., or v.
  - i. Visual Arts 2100/2101
  - ii. Visual Arts 2200/2201
  - iii. Visual Arts 2310/2311, and/or 2320/2321
  - iv. Visual Arts 2400/2401
  - v. Visual Arts 2600/2601
- b. Three of i., ii., iii., iv., or v.
  - i. Visual Arts 3100/3101
  - ii. Visual Arts 3200/3201
  - iii. Visual Arts 3310/3311 or 3320/3321
  - iv. Visual Arts 3400/3401

- v. Visual Arts 3500/3501
  - vi. Visual Arts 3000 and 3001
  - vii. Visual Arts 3510 and 3511
- c. Six additional credit hours in studio electives at 2000 or 3000 level.

Studio courses are offered in the following subjects: Drawing, Two-dimensional design, Three-dimensional design, Painting, Sculpture, Printmaking, Photography and Multi-media, Digital Imaging and Digital Multi-media. Courses in a studio subject consist of six hours of practical work in a studio class each week. Assigned projects will require that considerable additional studio work be done outside scheduled class time. Students will supply their own art materials. Some courses may not be offered every year. Please consult with the Fine Arts Division prior to registration to confirm course offerings.

6. Visual Arts 4950/4951

- Notes: 1. *Visual Arts 1000 and 1001 and Visual Arts 2300 and 2301 are not accepted as credits towards the Bachelor of Fine Arts (Visual Arts) degree.*  
 2. *Graduation Work. One work of art done during the fourth year will be selected by the Visual Arts Program, in consultation with the student, and retained for the permanent collection of the College.*

**Program Example:**

**Year 1 - Foundation Year**

Drawing I (100A/B)  
 Two-D Design (110A/B)  
 Three-D Design (120A/B)  
 Six credit hours in Art History Survey I, II (2700/2701)  
 Six credit hours in English Language and Literature

**Year 2**

Second Year Drawing I, II (2000/2001)  
 Two of: Introductory Painting I, II (2100/2101), Introductory Sculpture I, II (2200/2201), Introductory Printmaking I, II (2310/2311 or 2320/2321), Introductory Photography I, II (2400/2401)  
 Six credit hours in Art History Courses  
 Six credit hours in Academic Electives\*

**Year 3**

Intermediate Drawing I, II (3000/3001)  
 One of: Introductory Digital Imaging I, II (2600/2601), Intermediate Painting I, II (3100/3101), Intermediate Sculpture I, II (3200/3201), Intermediate Relief and/or Intaglio I, II (3310/3311), or, Intermediate Serigraphy and/or Lithography I, II (3320/3321), Intermediate Photography I, II (3400/3401), Multi-Media I, II (3500/3501)  
 Six credit hours in 2000 or 3000 level Studio Electives  
 Six credit hours in Art History Courses  
 Six credit hours in Academic Electives\*

**Year 4**

Independent Projects in Studio I, II (4950/4951) 3 credit hours each  
 Twelve credit hours in 2000 or 3000 level Studio Electives  
 Six credit hours in Art History Courses  
 Six credit hours in Academic Electives\*

\* To be chosen in consultation with the Program Chair.

## 9.3 Minor Program - Fine Arts

**Art History Minor**

Visual Arts 2700 and 2701  
 18 credit hours in Art History at the 3000- or 4000-level

## 10 Course Descriptions

- Notes: 1. *Prerequisites may be waived by the Head/ Program Chair of the course area in question.*  
 2. *Upon the recommendation of the appropriate Program Chair(s), any Major requirements may be waived by the Academic Studies Committee.*  
 3. *Some of the courses in this section of the Calendar are available only at Sir Wilfred Grenfell College. Students who choose to transfer from Grenfell to the St. John's campus should see their faculty advisor to determine the extent to which such courses can be applied to their new program.*

### 10.1 Anthropology

In accordance with Senate's *Policy Regarding Inactive Courses*, the course descriptions for courses which have not been offered in the previous three academic years and which are not scheduled to be offered in the current academic year have been removed from the following listing. For information about any of these inactive courses, please contact the Head of the Division.

Anthropology 1030 (Introduction to Archaeology and Physical Anthropology) and 1031 (Introduction to Social and Cultural Anthropology) or an equivalent course or courses are required of all students wishing to concentrate in anthropology.

The following courses, cross-listed with the Department of Sociology and identified by the prefix "S/A", are also taught at the introductory level: 2200, 2210, 2220, 2230, 2240, 2260, 2270, 2280, and 2350. These courses can be taken as first courses or may be taken following an Anthropology introductory course.

**1030 Introduction to Archaeology and Physical Anthropology** is a broad overview of Archaeology and Physical Anthropology introducing the concepts of human biological and cultural evolution and the methods and techniques by which these are investigated. The course is designed to provide the basis for further study in the disciplines.

Note: *Credit may not be obtained for both Anthropology 1030 and the former Anthropology 1000 or 2000.*

**1031 Introduction to Social and Cultural Anthropology** is a general introduction to Anthropology emphasizing different forms of society and culture. Cultures within and outside the Western tradition will be examined, ranging from small-scale to more complex pre-industrial societies.

Note: *Credit may not be obtained for both Anthropology 1031 and the former Anthropology 1000 or 2000.*

**2200 Communities (S/A 2200)** is an interdisciplinary examination of the concept of Community. Readings will include community studies from North America and Europe.

**2210 Communication and Culture (S/A 2210)** is an examination of verbal and non-verbal systems of communication, and the influence of language on human cognition.

**2230 Newfoundland Society and Culture (S/A 2230)** (same as Folklore 2230) examines the Sociology and Anthropology of the Island of Newfoundland. The focus is on social and cultural aspects of contemporary island Newfoundland.

**2240 Canadian Society and Culture (S/A 2240)** is a descriptive and analytic approach to the development of Canadian society and culture.

**2260 War and Aggression (S/A 2260)** is a critical review of ethological, psychological and sociological approaches to the understanding of violence and organized aggression.

**2270 Families (S/A 2270)** is a comparative and historical perspective on the

family as a social institution, the range of variation in its structure and the determinants of its development.

**2300 Newfoundland Folklore** (same as Folklore 2300) is a survey of the various types of Folklore: tale, song, rhyme, riddle, proverb, belief, custom, childlore and others, with stress on their function in the Newfoundland community culture. Individual collection and analysis of materials from the students' home communities, supplemented by data from the Memorial University of Newfoundland Folklore and Language Archive.

Prerequisite: Folklore 1000 or 2000, or Anthropology 1031.  
Note: *Credit may not be obtained for both Folklore 2300 and the former Folklore 3420.*

**2350 Religious Institutions (S/A 2350)** (same as Religious Studies 2350) is a comparative study of religious institutions and beliefs, calendrical feasts and solemnities, religious roles and hierarchies, ritual innovation and revitalization.

**2410 Classics in Social and Cultural Anthropology** is an examination of selected milestone monographs, ground-breaking studies for subdisciplinary specialties and major syntheses.

**2411 Anthropologists in the Field** base many of their ideas on experiences they have while living in other cultures. This course examines the human relationships through which anthropologists explore cultures and how in turn these relationships affect the anthropologists and the development of their discipline.

**2412 Threatened Peoples** is an examination of key social and cultural factors involved in the global extinction of small-scale societies; the intrusive influences that jeopardize small-scale societies, such as disease, economic and military incursion; the role of international non-governmental agencies in aid of threatened peoples; and the role of the anthropologist in this human crisis.

**2413 Modern World Cultures** is an examination of significant studies of 20th century populations and their implications for understanding the human condition.

**2430 Physical Anthropology: The Human Animal** investigates the human animal as we exist now and as we developed through time. Students will discover how the study of fossil remains, living and extinct primates, and the applications of the principles of genetics, adaptation and variation of human evolution help to provide an understanding of how biology and culture have interacted to produce modern humans.

Prerequisite: Anthropology 1030.

**2500 Folk Literature** (same as Folklore 2500) is an examination of the major genres of folk literature: folk narrative, folk poetry and song, folk drama, and the traditional generic forms within folk speech. An introduction to the textual, comparative and contextual methods of analysis. The literature discussed will be international in scope.

Prerequisite: Folklore 1000 or 2000, or Anthropology 1031.  
Note: *Credit may not be obtained for both Folklore 2500 and any of the former Folklore 3400, English 3400, Sociology/Antropology 3400.*

**3080 The Third World** is an examination of the anthropology of the Third World. The course considers perspectives on peasantry, including such topics as underdevelopment, land reform, hunger, political and social movement.

**3083 Cultural Crises and the Environment** is an examination of social and cultural aspects of dilemmas in the use of renewable and non-renewable resources such as animals, arable land, forests, fisheries, air, water, fossil fuel, and nuclear energy. Special attention to Third World and marginal populations.

**3140 Social Movements (S/A 3140)** is an examination of social movements which challenge prevailing social institutions and cultural values. Social movements considered may include religious cults and sects, millenarian movements, attempts at utopian and communal living, feminism, labour and revolutionary movements.

**3210 Persistence and Change in Rural Society (S/A 3210)** assesses the social and cultural significance of the rural experience in the face of expanding urbanism. Topics may include (a) the nature of rural society in Canada, (b) similarities between Canadian and European rural society, (c) utopian and anarchist movements in rural life, and (d) reaction of agricultural populations to external influence.

**3314 Gender and Society (S/A 3314)** is an examination of biological, psychological, social and cultural aspects of gender, with an emphasis upon contemporary directions of change in sex roles.

**3520 The Early Ethnohistory of North America's Native People** (same as History 3520) explores the North American native response to early European contact and initial settlement. Particular attention will be paid to cultural change resulting from the adoption of European goods, participation in the fur trade, the introduction of European disease, and the adaptation to a permanent European presence.

**3525 The Later Ethnohistory of North America's Native People (A/P)** (same as History 3525) examines Indian and Inuit cultural history of the 18th and 19th centuries, including the fur trade, resistance and accommodation to European expansion, the emergence of revitalization movements, demographic changes, and population shifts. Special emphasis will be placed on the ethnohistory of the native peoples of what is now Canada and

northern United States.

**4072 Social and Cultural Aspects of Death (S/A 4072)** covers topics which may include: symbolic meanings and values attached to death; cultural and historical variations in the management of death, e.g. treatment of the 'terminally ill', burial rites, the mourning process, and the social fate of survivors, together with the social and psychological meanings of these behaviours. Open to those without normal prerequisites by permission of the instructor.

**4440 Music and Culture (S/C 4440)** (same as Folklore 4440 and Music 4440) explores traditional music as an aspect of human behaviour in Western and non-European cultures. Examination of the functions and uses of music; folk-popular-art music distinctions; and the relation of style to content. Outside reading, class exercises and individual reports will be required.

## 10.2 Biochemistry

**1430 Biochemistry for Nurses** is an introduction to the chemistry and structure-function relationships of carbohydrates, lipids and proteins. Basic metabolism of carbohydrates and fats, with emphasis on the biochemical fluctuations that occur in human health and disease. A brief introduction to molecular genetics. This course may not be used for credit to fulfil the requirements for a major in the Department of Biochemistry. Entry into this course is restricted to students in the Bachelor of Nursing (Collaborative) Program. Prospective fast-track program students should consult with the School of Nursing concerning admission to this course.

Prerequisite: Level 3 Chemistry or Chemistry 1010 or Chemistry 1810 or equivalent.

Lectures: Four hours per week

Note: *Credit may be obtained for only one of Biochemistry 1430 and the former 2430.*

## 10.3 Biology

Note: *Students may obtain credit for only 6 1000-level credit hours in Biology. Normally, these courses will be Biology 1001-1002, which are prerequisite to all higher courses in Biology, except where noted below.*

**1001-1002 Principles of Biology** is an introduction to the science of Biology, including a discussion of the unity, diversity and evolution of living organisms.

Three hours of lecture and a three-hour laboratory per week.

Note: *Biology 1001 is a prerequisite for Biology 1002.*

**2010 Biology of Plants** is a study of the structure, function and reproductive biology of plants, with emphasis on the vascular plants, and on their relationship to environment and human activities.

Three hours of lecture and a three-hour laboratory per week.

Prerequisites: Biology 1001, Biology 1002, and Chemistry 1001.

**2040 Modern Biology and Human Society I** examines various aspects of the human body, and the implications of modern biological research for human beings. Topics include cancer; diet and nutrition and associated diseases; circulatory disease, immunity, human genetics, biorhythms, new diseases, genetic engineering and reproductive engineering.

Three hours of lectures/seminars per week.

**2041 Modern Biology and Human Society II** examines the origins and consequences of the environmental crisis of the 20th century. Topics include the population explosion, energy, material cycles, air and water and land pollution, global food supplies, the fisheries, wildlands, renewable and non-renewable resources, environmental ethics.

Three hours of lecture/seminar per week.

Note: *Biology 2040 and 2041 are not acceptable as any of the required courses for the Minor, Major or Honours programs in Biology. There are no prerequisites for these courses.*

**2122 Biology of Invertebrates** is a study of the invertebrates with emphasis on structure and function, adaptations and life histories. The laboratories will present a broad survey of the major invertebrate groups.

Three hours of lecture and three hours of laboratory per week.

Prerequisite: Biology 1001 and Biology 1002.

Note: *Credit may not be obtained for both Biology 2122 and the former Biology 3122.*

**2210 Biology of Vertebrates** is a study of the vertebrates, with emphasis on structure and function, adaptations and life histories.

Three hours of lecture and three hours of laboratory per week.

Prerequisite: Biology 1002.

Note: *Credit may not be obtained for both Biology 2210 and the former Biology 3210.*

**2250 Principles of Genetics** is an introduction to Mendelian and molecular genetics. Phenotype and genotype, behaviour of alleles in genetic crosses, chromosome theory of inheritance, genetic linkage, molecular biology of DNA, RNA and protein, molecular basis of mutation, recombinant DNA, applications of genetic biotechnology.

Three hours of lecture and three hours of laboratory per week.

Prerequisites: Biology 1001 and 1002; Chemistry 1010 and 1011 (or 1050/1051).

Prerequisites or co-requisites: Chemistry 2440 or 2400.

Note: *Credit may not be obtained for both Biology 2250 and the former Biology 3250.*

**2600 Principles of Ecology** is a conceptual course introducing the principles of ecology, including theoretical, functional and empirical approaches.

Three hours of lecture and three hours of laboratory per week.

Prerequisite: Biology 1002.

Note: *Credit may not be obtained for both Biology 2600 and the former Biology 3600.*

**3053 Microbiology for Nurses** is a course on the fundamentals of microbiology with an emphasis on medical microbiology. The course will include topics such as: host responses to infections, human diseases caused by microorganisms, and the control and exploitation of microorganisms. Entrance is restricted to Nursing students in the Bachelor of Nursing (Collaborative) program.

Lecture: Three hours per week.

Laboratories: Two hours per week.

Note: *Biology 3053 is not acceptable as one of the required courses for the Minor, Major or Honours programs in Biology, nor is it acceptable for any of the joint programs between Biology and other disciplines.*

## 10.4 Business

**1000 Introduction to Business** is an overview of business in the Canadian environment is presented in the course with emphasis on the stakeholders involved and the issues confronting managers. The course examines the functional areas of the enterprise (finance, marketing, production, and human resources management) in addition to providing an overview of the business system. An analysis of actual business situations provides a framework of study.

Note: *This course was formerly Business 2001. Credit may not be obtained for both Business 2001 and Business 1000.*

**1101 Principles of Accounting** will emphasize the concepts and issues of introductory financial accounting as they relate to the Canadian conceptual framework, and will also address the strengths and weaknesses of financial reporting at an introductory level. The student will be introduced to the accounting process and analysis of the balance sheet, income statement, and the statement of changes in financial position.

Note: *Credit may not be obtained for Business 1101 and either of the former Business 3100 and the former Business 2100.*

**1201 Principles of Marketing** provides an overview of the marketing function, emphasizing customer satisfaction as the focal point of an organization's activities. The course examines customer characteristics and behaviours as a crucial element in the design of effective marketing strategies and programs. The course also deals in detail with the elements of the marketing mix: products and services; pricing; distribution channels; and promotion.

Prerequisite: Business 1000 or the former Business 2001.

Note: *Credit may not be obtained for both Business 1201 and the former Business 3200.*

**1600 Introduction to Entrepreneurship** is an introductory course designed to give students a broad understanding of the field of entrepreneurship and the role that entrepreneurship plays in society. Topics will include the nature and theories of entrepreneurship, the characteristics and behaviours of entrepreneurs, and the entrepreneurial process in small and large firms. Students will get to think and act in a creative manner, obtain exposure to local entrepreneurs, assess their potential for entrepreneurial careers and develop attitudes and skills that will be useful in any organization. The course is also useful for those who will be dealing with smaller firms in the context of larger organizations and for those who will be working for entrepreneurs.

Prerequisite: Business 1000.

**2000 Business Communications** is an emphasis on the understanding and use of various forms of communication in the business organization. From an examination of the communication process, study progresses to planning, and developing skills in written and oral communications including business reports and letter writing.

**2101 Managerial Accounting** provides an overview of the use of financial data for managerial decision making. The student will be introduced to basic budgeting and analysis techniques for both service-oriented and manufacturing businesses.

Prerequisite: Business 1101.

Note: *Credit may not be obtained for both Business 2101 and the former Business 4100.*

**2201 Marketing Applications** applies the principles learned in Business 1201 in a variety of contexts and organizations. Students gain an appreciation for the application of marketing principles in specialist application areas such as: marketing for services, not-for-profit and public sector organizations, and in an international context. In addition, an overview and appraisal of the marketing function and of marketing performance is addressed through the marketing planning process.

Prerequisite: Business 1201.

Note: *Credit may not be obtained for both Business 2201 and the former Business 3200.*

**2301 Organizational Behaviour** focuses on the study of individual and group processes in formal organizations. The student is introduced to the

nature of work, the systematic approach to the study of behaviour, organizational roles and socialization, motivation, leadership, communication, and group dynamics.

Note: *This course was formerly Business 4300. Credit may not be obtained for both Business 2301 and Business 4300.*

**3101 Accounting Applications** continues the study of accounting on a more in-depth and detailed basis. Building on the theory and concepts of Business 1101 and Business 2101, Business 3101 will emphasize the procedures and techniques required for the preparation and presentation of accounting information and general purposes financial statements.

Prerequisites: Business 1101.

Note: *Credit may not be obtained for both Business 3101 and either the former Business 3100 or the former Business 2100.*

**3320 Introduction to Labour Relations** provides an introduction to the field of industrial and labour relations in Canada, with primary emphasis on the labour-management relationship. Students will be introduced to the basic elements of an industrial relations system, including the participants, their roles and relationships, the social, economic, legal and political environment in which the participants interact, and the process and outcomes of collective bargaining. Students may be exposed to various role playing exercises that are applicable to a career in industrial and labour relations.

**3401 Operations Management** presents and discusses the fundamental concepts necessary to understand the nature and management of the operations function in organizations. The course will focus on forecasting for operations, inventory management; capacity, aggregate and requirements planning; operations scheduling; quality management and continuous improvement; just-in-time systems; product and service design. Case studies will be used.

Prerequisites: Statistics 2500 and Business 2401.

Note: *Credit may not be obtained for both Business 3401 and Business 5400.*

**3700 Information Systems** provides an introduction to information systems to support operations and management. Topics include: an overview of information systems technology; data management; systems development approaches; and managing the information systems function.

Prerequisites: Computer Science 2801 (or equivalent computer literacy course) and Term 3 standing.

Notes: 1. *Credit may not be obtained for both Business 3700 and Business 6300.*

2. *Credit may not be obtained for both Business 3700 and Business 3701.*

**4000 Business Law I** is a course dealing with the law relating to certain aspects of business activity; includes introductory material on the nature of law and legal processes, together with a detailed study of certain aspects of the law of contract, examination of the general principles of the law of agency as they affect business operations; introduction to selected topics in company and partnership law.

Note: *This course was formerly Business 3000. Credit may not be obtained for both Business 4000 and Business 3000.*

**4320 Human Resource Management** introduces the student to the design, operation and management of P/HRM processes, their evaluation, and their contribution to employee and organization effectiveness. The principal processes considered are staffing, development, employment relations, and compensation. Consideration of the influence of relevant organizational and external conditions on P/HRM is included. The course views the management of human resources as the joint responsibility of line and P/HRM managers.

Prerequisite: Business 2301.

**4500 Financial Management I** is designed to introduce the student to the role of financial management in business, financial analysis techniques, working capital management, and long-term and short-term financing.

Prerequisites: Business 1101, Statistics 2500, and Economics 2010.

Note: *Credit may not be obtained for both Business 4500 and the former Business 4110.*

**5301 Organizational Theory** focuses on the organization, its environment, and its subsystems. From providing a basic appreciation of the role and practice of research in organizations, study extends to measures of organizational effectiveness, determinants of structure and design, power and politics, intergroup conflicts and conflict resolution, and organizational development and change.

Prerequisite: Business 2301.

Note: *This course was formerly Business 5300. Credit may not be obtained for both Business 5301 and Business 5300.*

## 10.5 Chemistry

Notes: 1. *Attendance for all Chemistry Laboratory sessions is mandatory. Failure to attend may result in a failing grade or deregistration from the course.*

2. *Students are strongly advised to complete the Chemistry sequence appropriate to their stream (Chemistry 1200/1001 or 1010/1011 or 1011/1031 or 1050/1051) on the campus they first attend prior to transfer to another campus. Consult the credit restrictions listed under the St. John's Campus Department of Chemistry section of the University Calendar.*

**1001 General Chemistry II** is rates of reaction, chemical equilibria,

thermodynamics, and introduction to organic chemistry.

Lectures: Four per week including tutorials.

Laboratory: Three hours per week.

Prerequisite: Chemistry 1200 or equivalent.

**1200 General Chemistry I** is atomic structure and bonding, stoichiometry, reactions in aqueous solutions, gases, energetics of chemical reactions, the periodic table, chemical bonding and molecular geometry, intermolecular forces. This introductory course is intended for students who have a knowledge of high school chemistry.

Lectures: Four per week.

Laboratory: Three hours per week.

(This course is offered at Sir Wilfred Grenfell College only).

Note: *Credit may be obtained for only one of the following pairs of courses: Chemistry 1000 and 1001; Chemistry 1200 and 1001.*

**1810 Elements of Chemistry** is matter, scientific measurement, atomic theory, the periodic table, chemical compounds and elementary bonding theory, the mole, chemical reactions, the chemistry of selected elements, gases, solutions, stoichiometry. This course is specifically intended for those who have no background in chemistry.

Lectures: Four per week.

Laboratory: Three hours per week.

(This course is offered at Sir Wilfred Grenfell College only).

Note: *This course may not be used as one of the Chemistry courses required for a B.Sc. Degree with a Specialization in Environmental Science at Sir Wilfred Grenfell College, nor for a Major or Honours in Chemistry, nor towards fulfillment of the 78 credit hours in science courses required for the B.Sc. degree on the St. John's campus. Credit may be obtained for only one of Chemistry 1810 or Chemistry 1800.*

**1900 Chemistry in Everyday Life** is a course that shows the relevance of chemistry in our daily lives. Following an introduction to atomic structure and chemical bonding, the course will focus on some of the following topics: organic chemistry and fuels; redox processes and batteries; acids, bases, and household cleaners; phases and detergents; the chemical components of foods; polymers and plastics; toiletries, and pharmaceuticals.

Lectures: Three hours per week.

Note: *Chemistry 1900 may not be used as one of the required courses towards a Minor, Major, or Honours in any science degree program.*

**2210 Introductory Inorganic Chemistry** is structural chemistry of the solid state. Introduction to molecular orbital and crystal field theories. Chemistry of the s, p, and d block elements.

Prerequisites: Chemistry 1001 (or 1031 or 1051), Mathematics 1000.

Lectures: Three per week.

Laboratory: Three hours per week.

**2300 Introductory Physical Chemistry** is introductory chemical thermodynamics and equilibria. Complementary laboratory work with an emphasis on quantitative analysis.

Prerequisites: Chemistry 1001 (or 1031 or 1051), Mathematics 1001, Physics 1051 (or 1021).

Lectures: Three per week.

Laboratory: Three hours per week.

**2400 Introductory Organic Chemistry I (F)** is bonding involving carbon; conformations and stereochemistry; introduction to functional groups and nomenclature; properties, syntheses and re-actions of hydrocarbons, alkyl halides and alcohols.

Prerequisite: Chemistry 1051 or 1031; or Chemistry 1010 and 1011 with a grade of at least 80% in each; or Chemistry 1011 with a grade of at least 85%; or Chemistry 1001 with a grade of at least 65%.

Lectures: Three per week.

Laboratory: Three hours per week.

Note: *Credit will not be given for more than one of Chemistry 2400, 2420, 2440 and 240A/B.*

**2401 Introductory Organic Chemistry II (W)** is an introduction to the interpretation of infrared, H and C-13 NMR spectroscopy; properties, syntheses and reactions of ethers, simple aromatic compounds, ketones, aldehydes, amines, carboxylic acids and their derivatives; aldol and related reactions.

Prerequisite: Chemistry 2400.

Lectures: Three per week.

Laboratory: Three hours per week.

Note: *Credit will not be given for more than one of Chemistry 2401, 2420, 2440, and 240A/B.*

**2440 Organic Chemistry for Biologists** is an introduction to the principles of organic chemistry with an emphasis on material relevant to biological molecules. The laboratory will introduce techniques and illustrate concepts covered in the course.

Prerequisite: Chemistry 1011 (or 1001 or 1051).

Lectures: Three per week.

Laboratory: Three hours per week.

Note: *This course is designed primarily for Biology Majors. It may not be used for credit by Chemistry or Biochemistry Majors and may not serve as a prerequisite for any other Chemistry course. Credit may be obtained for only one of Chemistry 2400, 2420, 2440, 240A/B.*

## 10.6 Classics

**1120 and 1121 Elementary Latin** is an introduction to the grammar and syntax of Latin, with particular attention paid to the acquisition of basic skills in reading, composition, and aural comprehension.

Note: *Students may not receive credit for Classics 1120 and 1121 and the former Classics 120A and 120B. Classics 1120 is the prerequisite for Classics 1121.*

**1130 and 1131 Elementary Ancient Greek** is an introduction to the grammar and syntax of ancient Greek, with particular attention paid to the acquisition of basic skills in reading, composition, and aural comprehension.

Note: *Students may not receive credit for Classics 1130 and 1131 and the former Classics 130A and 130B. Classics 1130 is the prerequisite for Classics 1131.*

**1100 Introduction to Greek Civilization** is a general illustrated survey of the origins and evolution of Ancient Greek Civilization. The course introduces the student to Greek social and political institutions, religion and myth, and achievements in art, philosophy, science and literature, as well as the influence of Ancient Greece on the modern world.

Note: *Students may not receive credit for Classics 1100 and either of the former Classics 1000 or 2000.*

**1200 Introduction to Roman Civilization** is a general illustrated survey of the origins and evolution of Ancient Rome. The course introduces the student to social, political, and legal institutions, the growth of the Roman Empire, Roman art, literature, and religions, as well as Rome's pervasive influence in the modern world.

Note: *Students may not receive credit for Classics 1200 and any of Classics 1000, 1101, or 2001.*

**2010 Greek Art and Architecture** is an introduction, through illustrated lectures, to the study of the art and architecture of Ancient Greece.

Note: *Students may not receive credit for Classics 2010 and either of the former Classics 3100 or 3101.*

**2015 Roman Art and Architecture** is an introduction, through illustrated lectures, to the study of the art and architecture of Ancient Rome.

Note: *Students may not receive credit for Classics 2015 and either of the former Classics 3100 or 3102.*

**2020 Hellenistic Civilization** is an illustrated survey of the political, social, intellectual and artistic developments in the Mediterranean world and the Near East from the death of Alexander the Great in 323 BC until the incorporation of the Kingdom of Egypt in the Roman Empire in 30 BC. Particular attention is given to the fusion of eastern and western thought-patterns and ideologies under the influence of Greek culture.

**2035 History of Classical Greece** (same as History 2035) is a survey of Greek History from the Bronze Age to the death of Alexander the Great, with special reference to the social and political institutions of the fifth century, B.C.

Note: *Students may not receive credit for Classics/History 2035 and either of the former Classics/History 3910 or Classics/History 2030.*

**2040 History of Rome** (same as History 2040) is a survey of Roman History from the early monarchy to the reign of Constantine with special reference to society and politics in the late Republic and early Empire.

Note: *Students may not receive credit for Classics/History 2040 and the former Classics/History 3920.*

**2055 Women in Greece and Rome** is an examination of the role of women in ancient Greece and Rome from the perspectives of religion, literature, art, society, and politics. Critical assessments of the scholarship and methodologies (including feminist methodologies) relevant to this topic will be included.

**2060 The Heroic Epic in Greece and Rome** is a survey of epic poetry from the archaic period to late antiquity, with emphasis on the works of Homer and Vergil.

**2701 History of Ancient Philosophy** (same as Philosophy 2701) is a survey of the origin and development of Western philosophy among the Greeks and Romans.

**2800 Classical Drama I** is a comprehensive study of the development of Greek tragedy and the satyr-play in their social, literary and technical context, through discussions of the origins of Greek tragedy, illustrated lectures on the development and technical aspects of the Greek theatre structures, and comprehensive analyses of plays from the major writers of the genres.

Note: *Students may not receive credit for both Classics 2800 and Classics 2805.*

**2801 Classical Drama II** is a continuation of the work done in Classics 2800. A comprehensive study of the development of Greek comedy and Roman tragedy and comedy in their social, literary and technical context, through discussions of the origins of Greek comedy and Roman tragedy and comedy, illustrated lectures on the development and technical aspects of the Roman theatre structures, and comprehensive analyses of plays from the major writers of the genres.

Prerequisite: Classics 2800.

Note: *Students may not receive credit for both Classics 2801 and Classics 2810.*



**3010 Greek Religion** (same as Religious Studies 3010) is a study of the role of religion in the private and public life of the Greek world.

Note: *Students may not receive credit for Classics/Religious Studies 3010 and the former Classics/Religious Studies 3121.*

**3020 Roman Religion** (same as Religious Studies 3020) is study of the role of religion in the private and public life of the Roman world.

Note: *Students may not receive credit for Classics/Religious Studies 3020 and the former Classics/Religious Studies 3121.*

**3110 Greek Literature in Translation** (same as English 3110) has representative readings in English of the principal literary forms of Classical Greece. The literary achievement of the Greeks and their contributions to Western letters and culture.

**3111 Latin Literature in Translation** (same as English 3111) has representative readings in English of the principal literary forms of Republican and Imperial Rome. The literary achievement of the Romans and their contribution to Western letters and culture.

**3130 Greek and Roman Mythology** (same as Folklore 3130) is a comparative study of the major myths of Greece and Rome as embodied in the literary and artistic remains of the ancient world with reference to their origins and their influence on later art and literature.

**4000 Seminar in Greek History and Society**

**4010 Seminar in Roman History and Society**

**4020 Seminar in Greek Literature and Culture**

**4030 Seminar in Roman Literature and Culture**

## 10.7 Computer Science

**1600 Basic Computing and Information Technology (F & W)** offers an overview of computers and information technology. It provides students with the knowledge necessary to answer questions, such as: What is a computer system? How does it work? How is it used? This is done through the use of popular spreadsheet, word processing and database software packages and the Internet. Social issues and implications will also be included.

Prerequisite: Level III Advanced Mathematics or Mathematics 1090, which can be taken concurrently.

Lectures: Three hours per week.

Laboratory: Three hours per week.

Note: *Students can receive credit for only one of Computer Science 1600, Computer Science 2650 or Computer Science 2801.*

**1700 Introduction to Computer Science (F & W)** lays the foundation for the art and the science of computing. The course contains fundamental and topical issues in computers, languages, programming and applications. This course is designed for potential Computer Science majors without a background in programming, but is also available for non majors.

Prerequisite/Co-requisite: Mathematics 1090 (or equivalent), or Mathematics 1000.

Lectures: Three hours per week.

Laboratory: Three hours per week.

**2801 Introductory Computing for Business (F & W)** introduces students to computer applications in business, document processing, application development, decision support, and information management. A three hour laboratory is required.

Prerequisite: Level III Advanced Mathematics, Mathematics 1090 or Mathematics 1000 which can be taken concurrently.

Note: *Students can receive credit for only one of Computer Science 1600, Computer Science 2650 or Computer Science 2801.*

## 10.8 Earth Sciences

**1000 Earth Systems** is a survey of the structure, function and interrelations of Earth's lithosphere, hydrosphere, atmosphere and biosphere. Topics include an exploration of the physical and chemical properties of planetary materials, forces driving and sustaining Earth systems, and biological modifiers (including humankind) on the Earth today.

Lectures: Three hours per week.

Laboratories: Three hours per week.

**1001 Evolution of Earth Systems** explores Earth's present structure and environment, the product of 4.5 billion years of planetary evolution, from the rock and fossil record. Examples, illustrated with rocks, fossils and maps, are selected from the geological history of North America, with particular emphasis on Newfoundland and Labrador.

Lectures: Three hours per week.

Laboratories: Three hours per week.

Prerequisite: Earth Sciences 1000.

**1002 Concepts and Methods in Earth Sciences** is an introduction to a broad range of concepts concerning the development of the geological record and the Earth; practical methods for collection of field based data; topics in map interpretation and geometric analysis, stratigraphy, paleontology, structure and petrology. The course is presented with an emphasis on the development of practical skills needed to pursue a career in Earth Sciences.

Lectures: Three hours per week.

Laboratories: Three hours per week.

Prerequisite: Earth Sciences 1000.

**2150 The Solar System (F & W)** is basic astronomy of the Solar System, tracing the search to understand motion of the Sun, Moon and planets in the sky; modern observations of planets, moons, comets, asteroids and meteorites and what they tell us about the origin and evolution of the Solar System.

Prerequisite: Mathematics 1000 (or 1081).

Note: *Earth Sciences 2150 is designed for students taking Earth Sciences as an elective subject and may only be used as a non-Science elective for Earth Sciences Majors and Earth Sciences Honours students.*

**3811 Paleontology (W)** is an outline of the major changes in life forms from Archean times through the Phanerozoic to the present day, including details of invertebrate and vertebrate faunas and major floral groups; mechanisms and effects of mega-, and microevolution in the fossil record; biology and classification of organisms and summaries of their geological significance in biostratigraphy, paleoecology and rock-building; relationships between major cycles of evolution and extinction to global processes. This course has a laboratory component.

Prerequisites: EITHER Biology 2120 (or Biology 1001 and 1002) and Earth Sciences 1002; OR Biology 2122 and 2210.

Note: *Credit may not be obtained for Earth Sciences 3811 and Biology 3811, or either the former Earth Sciences 3801 or Biology 3800.*

## 10.9 Economics

Economics 2010 and 2020 are prerequisites for all other Economics courses except Economics 2070.

**2010 Introduction to Microeconomics I** is scarcity and opportunity cost. Demand and supply. Elasticity. Household demand; marginal utility. Household demand; indifference curves. Production functions. Short-run and long-run cost functions. Perfect competition in the short run and the long run. Monopoly.

**2020 Introduction to Macroeconomics** is national income accounting, aggregate income analysis, money, banking and foreign trade.

**3030 International Economics - Issues and Problems in a Canadian Context** is an intermediate course in international economics. The course covers the theory of comparative advantage, the structure and policy issues of the Canadian balance of payments, the foreign exchange market and the institutional aspects of international commerce.

**3070 The Structure and Problems of the Newfoundland Economy** is an analysis of the structure of the economy of Newfoundland. Basic economic theory will be applied to current economic issues and problems in Newfoundland.

**3150 Money and Banking** is the operation of the money and banking system, with special emphasis on Canadian problems. Monetary theory will be treated in relation to income theory and foreign trade.

## 10.10 English Language and Literature

In accordance with Senate's *Policy Regarding Inactive Courses*, the course descriptions for courses which have not been offered in the previous three academic years and which are not scheduled to be offered in the current academic year have been removed from the following listing. For information about any of these inactive courses, please contact the Head of the Division.

- Notes:
1. *One of English 1000, 1050, the former 1100 and one of English 1001, 1051, 1110 are prerequisites for all other courses.*
  2. *Students cannot receive credit for more than one of English 1000, 1050, 1080, 1100 or for more than one of 1001, 1051, 1101, 1102, 1103, and 1110.*
  3. *A student cannot receive credit for more than 6 credit hours at the first year level. This includes unspecified transfer credits.*
  4. *No students shall register in any course having an initial digit "3" unless they have successfully completed at least 6 credit hours in courses having an initial digit "2".*
  5. *No students shall register in any course having an initial digit "4" unless they have successfully completed at least 6 credit hours in courses having an initial digit "3".*

### 10.10.1 English Core Courses

**1000 Introduction to English I** is an introduction to English literature and to the use of the English language with a particular emphasis on composition.

**1001 Introduction to English II** is a continuation of the studies begun in English 1000.

Prerequisite: English 1000 or 1050 or the former 1100.

**1110 Comprehension, Writing and Prose Style** is an introduction to the analysis of prose and to writing for various purposes, including exposition.

Prerequisite: English 1000 or 1050 or 1080 or the former 1100.

Lectures: Three hours per week.

Notes: 1. *Students cannot receive credit for both 1110 and 2010.*

2. *Students cannot receive credit for both English 1020 and 1110, nor for both 1030 and 1110.*

**2005 Literary Survey I (The beginnings to 1660)** introduces students to the major writers by detailed study of selected texts. The course will include such authors as Chaucer, Mallory, Shakespeare, Spenser, Bacon, Webster, Donne and works such as *Beowulf*, the Old English Elegies and *Gawaine and the Green Knight*. Recommended for English specialization students that English 2005 be taken first in the English 2005-2006-2007 sequence.  
Note: *Students can receive credit for only one of English 2000, 2005, and 2110.*

**2006 Literary Survey II (1660-1837)** introduces students to the major writers by detailed study of selected texts. The course will include such authors as Dryden, Pope, Swift, Johnson, Fielding, Blake, Wordsworth, Austen, Byron, Keats and Shelley. Recommended for English specialization students that English 2006 be taken second in the 2005-2006-2007 sequence.

**2007 Literary Survey III (1837 to the present)** introduces students to the major writers by detailed study of selected texts. The course will include such authors as Tennyson, Browning, Arnold, Hardy, George Eliot, Dickens, Yeats, T.S. Eliot and Dylan Thomas. Recommended for English specialization students that English 2007 be taken third in the English 2005-2006-2007 sequence.  
Note: *Students can receive credit for only one of English 2001, 2007, and 2111.*

**3205 Shakespeare Survey** is a study of at least eight plays, two from each dramatic mode: comedy, history, tragedy, and romance.  
Prerequisite: Two second-year English courses.  
Note: *Students can receive credit for only two of 3200, 3201, 3205 and 3206.*

**3206 Shakespeare and the Classical Tradition** is a study of the relationship between Shakespeare and his major classical sources, with a particular focus on the use of classical literature in the Renaissance.  
Prerequisite: Two second-year English courses.  
Note: *Students can receive credit for two of 3200, 3201, 3205, 3206 and 4211.*

**3395 The Literary Uses of English from the Earliest Times to the Present** is an exploration of the development of the English language, as evidenced by its literary uses.  
Note: *Students cannot receive credit for both English 3395 and 2401.*

**4105 Critical Approaches and Theory** is a survey of critical approaches to English Literature, particularly those adopted by twentieth century readers. The course will attempt to give an account of the theories on which these approaches are based and some attention will be paid to the application of different approaches to specific works of literature.  
Note: *Students can receive credit for only one of English 4101 and 4105.*

**4950 Individual Project in English** is an individual project of a creative, or a critical, or a research character on a topic which is subject to the approval of the Program Chair. The topic will be prepared under the supervision of a designated faculty member or members.  
Note: *Students can receive credit for only one of English 4950 and 4990.*

## 10.10.2 Dramatic Literature

**2350 Introduction to Drama I** is a survey of the major plays in the history of western drama from the Greeks to the end of the eighteenth century.  
Note: *Students cannot receive credit for both English 2002 and 2350.*

**2351 Introduction to Drama II** is a survey of the major plays in the history of western drama from the 19th Century to the present.  
Note: *Students cannot receive credit for both English 2002 and 2351.*

**3021 English Drama to 1580** is a study of the development of English drama from the Middle Ages to 1580. The course may also consider the popular arts, such as folk plays and mumming.

**3171 Anglo-Irish Drama** is a study of representative Anglo-Irish drama by such authors as Wilde, Shaw, Yeats, Synge, Lady Gregory, O'Casey, Behan, Friel and Molloy.  
Note: *This course may not be taken for credit by students who have completed English 3170 or 3180.*

**3181 Drama of the Restoration and Eighteenth Century** is a study of major dramatic texts from 1660 to the end of the eighteenth century.

**3275 Modern Drama (1830-1930)** is a study of western drama and performance during the period 1830-1930, with a focus on theatrical and dramatic texts and movements, as well as artistic, social, political, technological, and philosophical influences.  
Note: *Students can receive credit for only one of English 3275, the former 3300, and 4300.*

**4302 Contemporary British Drama** is a study of representative dramatic works of contemporary British drama.

**4305 Contemporary Drama** is a study of modern and post-modern western drama and performance from 1930 to the present, with a focus on theatrical and dramatic texts and movements, as well as artistic, social, political, technological and philosophical influences. Recommended previous course: English 3275.  
Note: *Students can receive credit for only one of English 4301, the former 3301, and 4305.*

**4307 Contemporary Canadian Drama** is a study of contemporary drama and performance in Canada, focusing on texts representative of Canada's cultural and regional diversity.  
Note: *Students cannot receive credit for both English 3156 and 4307.*

**4308 20th Century American Drama** is a study of American drama and performance from the turn of the century to the present, focusing on the theatre's historic role in the definition, reinforcement and scrutinizing of American mythology.  
Note: *Students cannot receive credit for both English 3260 and 4308.*

**4317 Elizabethan-Jacobean Drama** is a survey of Shakespeare's dramatic rivals and the Elizabethan and Jacobean repertoires. Prerequisites: English 3200 or 3201.  
Note: *Students cannot receive credit for both English 3022 and 4317.*

**4836-4844 Special Topics in Drama** is supervised study in specialized areas of dramatic literature. Course topic, design, and requirements to be determined through consultation by the student with the instructor. Prerequisites: Permission of the instructor.

## 10.10.3 Canadian Literature

**2146 Canadian Prose after 1949** is a study of the outstanding works of Canadian prose from 1949 to the present.  
Prerequisite: Two first-year English courses.  
Note: *Students can receive credit for only one of English 2146, English 2150, English 2151 and the former English 3146.*

**2155 Newfoundland Literature** is a study of Newfoundland literature with emphasis on representative writers since 1949.  
Note: *Students cannot receive credit for both English 2155 and 3155.*

**2156 Canadian Short Stories** is a study of Canadian short stories which aims to give the student a heightened appreciation of individual short stories, and some sense of the range of Canadian accomplishment in the genre.

**3145 Canadian Fiction to 1949** is a study of outstanding works of Canadian fiction from the beginnings to 1949.

**3147 Canadian Poetry to 1949** is a study of representative Canadian poetry from the pre-confederation period to 1949.

**3148 Canadian Poetry After 1949** is a study of Canadian poetry from 1949 to the present, with emphasis on the work of major poets and an examination of the various styles and theories of poetry developed during the period.

**3149 Canadian Prose** is a study of selected works of Canadian prose, covering both fiction and non-fiction.

**4307 Contemporary Canadian Drama** course description can be found in the dramatic literature list above.  
Note: *Students cannot receive credit for both English 3156 and 4307.*

**4825-4835 Special Topics in Canadian Literature** is a variety of topics are available, to be offered as resources permit.

## 10.10.4 Modern Literature

**2215 American Literature to 1900** is a study of the historical origins and development of nineteenth century American Literature, concentrating on a selection of works within their political, social and artistic contexts.  
Note: *Students cannot receive credit for both English 2214 and 2215.*

**2242 Science Fiction** is a survey of Science Fiction from its earliest days to the present. Subjects that will be considered include the evolution of the genre, the relations among humans, technology and multinational capitalism, and the significance of memory and space.  
Lectures: Three hours per week.  
Prerequisite: Students must have completed a first-year English sequence to be eligible for English 2242.  
Note: *Credit may not be obtained for both English 2242 and English 2811.*

**2705 Modern World Literature in Translation** is a study of modern world literature in English translation, with focus on writers of the twentieth century who have attained international stature.

**2805 Women's Writing to 1900** is a study of writing by women in the British Isles and North America from the Middle Ages to 1900, including such items as letters and journals as well as fiction, poetry, and drama.  
Note: *Students can receive credit for 2805 and only one of 3810 or 3830. (This credit restriction note replaces the note in earlier calendars and is retroactive to September 1, 1993.)*

**2870 Children's Literature** is an introduction to literature written for children and young people. Beginning with an examination of the history of children's literature in the British Isles and North America, the course will focus on twentieth century and contemporary works, touching on a broad range of genres, audiences, and reading levels.

**3215 20th Century American Literature** is study of American poetry and fiction from 1900 to 1960.  
Note: *Students can receive credit for only three of English 3215, 4260, 4261, and 4270.*

**3216 20th Century British and Irish Literature** is a study of British and Anglo-Irish poetry and fiction from 1900 to 1960.

**3810 20th Century Non-Fiction Writing by Women** is a study of twentieth century topical writing by women, including writing about social, political, and artistic and literary questions. Non-traditional as well as traditional genres will be studied.

Prerequisites: English 2805 or permission of the instructor.

Note: *Students can receive credit for 3810 and only one of 2805 or 3830. (This credit restriction note replaces the note in earlier calendars and is retroactive to September 1, 1993.)*

**3905 Creative Writing** is a workshop course for aspiring writers of poetry and/or fiction. Limited enrolment. Applicants will be required to submit a sampling of their previous and current work.

Prerequisite: permission of the instructor.

Note: *Students can receive credit for only two of English 3900, 3901, and 3905.*

**4245 Contemporary Fiction in English** is an in-depth study of a selection of recent short fiction and novels in English. The focus will be on recent developments in American, British, Irish and Commonwealth fiction (excluding Canadian).

**4246 Contemporary Poetry in English** is an in-depth study of contemporary poetry in English. The focus will be on major poets and developments in the U.S.A., Britain, Ireland and the Commonwealth (excluding Canada) since 1945.

**4905 Advanced Creative Writing** is a workshop course for creative writers who have demonstrated considerable talent and skill in poetry and/or prose fiction. Limited enrolment.

Prerequisite: Permission of the instructor.

## 10.10.5 English Courses for Non-Major Students

**2010 Comprehension Writing and Prose Style (I)** will chiefly emphasize the development of (a) the capacity to understand and appreciate the varieties of prose through close analysis of a wide range of examples, and (b) the ability to write expository and other kinds of prose.

Note: *This course may not be taken for credit by students who have completed English 1110.*

**3110 Greek Literature in Translation** (same as Classics 3110) is representative readings in English of the principal literary forms of Classical Greece. The literary achievement of the Greeks and their contributions to Western letters and culture.

**3111 Latin Literature in Translation** (same as Classics 3111) is representative readings in English of the principal literary forms of Republican and Imperial Rome. The literary achievement of the Romans and their contribution to Western letters and culture.

## 10.11 Environmental Science Courses

For existing Memorial University of Newfoundland courses, the numbers remain the same. For new courses in Environmental Science, the following four-digit scheme is used:

1st digit = Year

2nd digit = Parent Discipline:

0 = Multidisciplinary

1 = Biology

2 = Chemistry

3 = Earth Science

4 = Physics

9 = Project

3rd digit = Subdiscipline:

(Biology): 1 = Botany 1 = Analytical 5 = Research

(Chemistry): 2 = Zoology 2 = Inorganic 8 = Science Writing

(Multidisciplinary): 3 = Ecology 3 = Physical 6 = Environmental 4 = Organic

4th digit = Numerical Sequence.

Courses specifically designed for the environmental science program(s) are given the designation "Envs". Thus, for example, in the Winter semester of the 2nd year, Environmental Chemistry is offered, with a course number = **Envs 2261**.

### 10.11.1 Environmental Biology Courses

**3110 Taxonomy of Flowering Plants** is a study of the biodiversity of flowering vascular plants (Magnoliophyta) through the practical identification of Newfoundland families, genera, and species. Related taxonomic and biogeographical principles will be stressed.

Prerequisite: Biology 2010 or equivalent.

Three two-hour laboratory periods per week of integrated practice and theory.

Notes: 1. *Credit can be obtained for only one of Environmental Science 3110 or Biology 3041.*

2. *Students must submit a collection of flowering plants identified to the species level. Detailed instructions should be obtained from the instructor in the spring/summer prior to the commencement of this course.*

**3130 Freshwater Ecology** is the study of freshwater ecosystems (lakes, rivers, streams, peatlands). Included are abiotic components, community structures, energy flow, biogeochemical cycles, and the evolution of natural and altered aquatic ecosystems. Emphasis will be placed on field and laboratory studies of the ecology of freshwater organisms and systems in western Newfoundland.

Prerequisites: Biology 2010, 2122, 2600; one of Chemistry 1001 or 1011.

Lectures: Three hours per week.

Laboratory: Three hours per week.

**3131 Impacted Terrestrial Ecosystems** is an examination of ecological and evolutionary responses by organisms in terrestrial ecosystems to human-derived and natural perturbations. Advanced conceptual, empirical and experimental approaches will be used, with an emphasis on sampling local habitats.

Prerequisites: Biology 2600; and two of Biology 2010, 2122, 2210 or the permission of the instructor and Program Chair.

Three hours of lecture and three hours of laboratory per week.

Note: *Credit can be obtained for only one of Environmental Science 3131 or Biology 3610.*

**4132 Analytical Ecology** states that the assessment of environmental impacts on higher-level ecological systems requires a critical analysis of scientific reports, along with the ability to evaluate ecological terminology and concepts and associated statistical methodologies. Students in this course will critically read and analyze recent scientific literature in Environmental Biology, with selected topics at the community, ecosystem and landscape level, and examine related univariate and multivariate statistical procedures

Prerequisites: Biology 2600, Statistics 2550 (or equivalent), with 6 credit hours from the Environmental Science Core (i.c.).

Lectures: Three hours of lectures plus a three-hour laboratory/discussion group each week.

**4133 Conservation Biology** will bring together the principles of ecology and conservation biology at an advanced level. Current issues and techniques will be discussed with an aim towards understanding how populations of native flora and fauna can be managed for long-term conservation in the face of habitat degradation and loss.

Prerequisites: At least two of Environmental Science 3110, 3130, and 3131; or per-mission of instructor.

Recommended: Environmental Science 4132 (formerly Biology 4360)

Three hours of lectures plus a three-hour laboratory/discussion group per week.

**4140 Environmental Science Field Course** is a course providing practical experience in the observation, collection, identification and quantification of organisms and the various environmental parameters which affect them in pristine and disturbed habitats. Combinations of freshwater, marine and terrestrial habitats will be studied using techniques from various scientific disciplines. The actual combination of habitats, organisms, and techniques will vary from year to year.

Prerequisites: Biology 2600, Statistics 2550, with a minimum of eighty credit hours from Environmental Science Program (or equivalents) and permission of the instructor and Program Chair.

Note: *See APICS Field Course List at [www.mun.ca/biology/biologyfcs.html](http://www.mun.ca/biology/biologyfcs.html) Transfer of credit regulations apply.*

### 10.11.2 Environmental Chemistry Courses

**2261 Survey of Environmental Chemistry** is an introduction to environmental problems, underlying chemistry and approaches to pollution prevention. Stratospheric chemistry and the ozone layer. Ground level air pollution. Global warming and the Greenhouse Effect. Toxic organic chemicals (TOCs), including herbicides, pesticides. Toxicology of PCBs, dioxins and furans. Chemistry of natural waters. Bioaccumulation of heavy metals. Energy production and its impact on the environment, including nuclear energy, fossil fuels, hydrogen.

Prerequisites: Chemistry 1001 or 1031 or 1051 or 2440 or the permission of the instructor and Program Chair.

Lectures: Three hours per week.

**3210 Environmental Analytical Chemistry I** is treatment of data, error analysis, wet methods of analysis of laboratory and field samples. Volumetric methods for acidity, alkalinity and hardness; chemical and biological oxygen demand (COD and BOD). Gravimetric methods for sulphate and phosphates. Theory and application of specific ion electrodes analysis of metal ions, dissolved gases and halide ions. Turbidimetric and nephelometric measures of water quality. Spectrophotometric analysis of trace metal ions.

Prerequisites: Chemistry 2300 and 2210.

Lectures and Laboratory: Not more than seven hours per week.

**3211 Environmental Analytical Chemistry II** is theory and application of spectroscopic methods of analysis (including error analysis) of environmentally important compounds. Spectrophotometric, FTIR, light scattering, chromatographic (GC, GC/MS, HPLC), fluorescence,

phosphorescence, atomic absorption and electroanalytical methods will be studied. Synthetic laboratory samples and field samples will be examined by these techniques.

Prerequisites: Environmental Science 3210 (or equivalent).

Lectures and Laboratory: Not more than seven hours per week.

**3260 Industrial Chemistry** is chemical principles used in the manufacture of inorganic and organic chemical products; electrochemical, petrochemical, polymer, pulp and paper, agricultural, cement, cosmetics, detergent and paint industries. Processes, specific pollutants of current interest: inorganic (e.g. mercury, nitrogen oxides and sulfur oxides gases, lead etc.) and organic (e.g. PCBs, chlorinated hydrocarbons, freons, pesticides/herbicides). Industrial sources and analytical methods of detection will be studied.

Prerequisites: Chemistry 2210, 2401, and Environmental Science 2261 (Envs 2261 may be taken concurrently) or permission of the instructor and Program Chair.

Lectures: Three hours per week.

**3261 Atmospheric Chemistry** is electronic, vibrational and rotational spectroscopy. Rates and mechanisms of gas phase reactions (particularly photochemical). Thermodynamics of the atmosphere. Formation, evolution and structure of the Earth's atmosphere. Chemical and physical properties of the atmospheric gases. Global element cycles. The stratosphere and ozone variability. The ionosphere. Atmospheric pollutants. Problems of the "greenhouse" gases. Aerosol chemistry. Wet and dry deposition.

Prerequisites: Chemistry 2300, 2210 or the permission of the instructor and Program Chair.

Lectures: Three hours per week.

**4230 Aquatic Chemistry I** is thermodynamics and kinetics of model systems. Acids and bases (including buffer intensity and neutralizing capacity), dissolved gases, precipitation and dissolution. Metal ions in aqueous solution. Redox control in natural waters. Pourbaix diagrams. Regulation of chemical composition of natural waters, pollution and water quality.

Prerequisites: Environmental Science 3211 and one of Chemistry 2400 or 2440 or permission of the instructor and Program Chair.

Lectures and Laboratory: Not more than seven hours per week.

**4239 Aquatic Chemistry II** is heterogeneous aspects of aquatic chemistry. Surface chemistry of oxides, hydroxides and oxide minerals. Aggregation of colloids and the role of coagulation in natural waters. The oil-water interface. Inorganic and organic complexes in natural waters and problems of specificity.

Prerequisites: Environmental Science 4230.

Lectures and Laboratory: Not more than six hours per week.

**4240 Organic Chemistry of Biomolecules** is structure and properties of carbohydrates, proteins, lipids, steroids, DNA and RNA. The chemistry of the cell in relation to its toxicology; effects of bioactive agents on cells, organelles, tissues and whole organisms. Natural products including those from the rain forest and marine environments. The role of metal ions in biomolecules. Examples of biosynthesis. Chemistry and mechanisms of mutagenesis and carcinogenesis.

Prerequisites: Chemistry 2401 or 2440 or permission of the instructor and Program Chair.

Lectures: Three hours per week.

**4249 Environmental Organic Chemistry** focuses on anthropogenic sources of organic chemicals and pollutants in the environment. Concepts of organic chemistry (synthesis, structure, physical properties, chirality, industrial organic processes), biological chemistry (enzymes, oxidative pathways) and physical chemistry (equilibria, partitioning) extended and applied to mass transport through soil, water and air. Kinetics and mechanisms of chemical, photochemical and biological degradation and conversion of organics. Structure-reactivity relationships for organic chemicals and degradation intermediates in the environment.

Prerequisites: Environmental Science 4240, 3261, 4230 or the permission of the instructor and Program Chair.

Lectures: Three hours per week.

### 10.11.3 Other Environmental Science Courses

**1000 Introduction to Environmental Science** is an introduction to the study of the environment. Environmental principles, issues and problems will be described and placed in a historical and societal context.

**2360 Geological Hazards and Natural Disasters** will introduce students to the geological aspects of the natural environment and the impacts that natural geological processes and phenomena may have on humanity. The impact of geological hazards and natural disasters on human society and behaviour will be examined through case studies.

Prerequisite: This course is restricted to students with 15 credit hours or more.

**2370 Global Environmental Change** is a survey of the Earth as a dynamic system. Discussion of interacting cycles that define the Earth's environment. Material cycles and energy concepts. Evolution of the atmosphere in response to lithospheric, biospheric and hydrospheric changes. Major global environmental changes from Earth's formation to present. Emphasis on self-regulating ability of the Earth system.

Lectures: Three hours per week.

Prerequisite: This course is restricted to students with thirty credit hours or more.

**2371 Oceanography** is historical review of science of oceanography. Earth and Earth systems (including plate tectonics). Marine sediments and sedimentary environments. Chemical and physical properties of seawater. The atmosphere and the oceans, ocean circulation. Waves and tides, coastal environments, distribution of organisms. Applied oceanography.

Lectures: Three hours per week.

Prerequisite: This course is restricted to students who have completed thirty credit hours or more.

**2430 Energy and the Environment** is energy, energy conversion, heat transfer, the laws of thermodynamics, nuclear processes and radiation will be treated. Practical problems such as the energy shortage, human influences on climate, resource extraction, nuclear power etc. will be discussed.

Prerequisites: Mathematics 1081 or 1000; Physics 1021 or co-requisite 1051.

Lectures: Three hours per week.

**2450 Meteorology** as an application of physics and mathematics to the study of the atmosphere. Atmospheric motion on the global, synoptic, meso- and micro-scales. An introduction to atmospheric radiation and thermodynamics, clouds and precipitation. Vertical soundings and the analysis and interpretation of surface and upper-air weather maps.

Prerequisites: Physics 1021 or co-requisite 1051.

Lectures: Three hours per week.

**3072 Comparative Marine Environments** will investigate the physical, chemical, geological and biological characteristics of the major marine environments from the coastal zone to the abyss and from the equator to the poles. The objective of the course will be an integrated study of the parameters that define the various environments. Emphasis will be placed on the interaction of organism and environment. The influence of the environment on the form, function and behaviour of organisms and the influence of the organism in modification of the physical environment will be stressed.

Prerequisite: Environmental Science 2371.

**3470 Transport Phenomena** is fundamentals of fluid flow. Conservation laws for mass, momentum, and energy. Dimensional analysis. Turbulence. Confined fluid flows. Fundamentals of heat transfer. Conduction, convection, and radiation. Diffusion, dispersion, and osmosis. Applications to transport of pollutants at the microscopic and macroscopic scale.

Prerequisites: Mathematics 1001. Physics 1020 and 1021 or 1050 and 1051.

Lectures: Three hours per week.

**4000 Environmental Science Seminar** is current topics in environmental science are reviewed and discussed in a seminar format. Seminars will be presented on current research and environmental issues by faculty, students and guest speakers from universities, government and industry.

Prerequisite: This course is restricted to Environmental Science students who have completed 80 credit hours or more, to include Biology 2600, Statistics 2550 and one of the following courses: Chemistry 2440, 2401, 2210 or 2300.

**4069 Fundamentals of Soil Systems** is the chemistry and biology of soil, including inorganic soil components, chemistry of soil organic matter, soil equilibria, sorption phenomena on soils, ion exchange processes, kinetics of soil processes, redox chemistry of soils, soil acidity, chemistry of saline and sodic soils, organic pollutants, trace and toxic elements in soils, soil organisms (microbial decomposers, micro and macro biota), organic matter cycling, nutrient cycling and fertility and productivity, soil conservation and sustainable agriculture.

Laboratory will cover a number of key physical, chemical and biological properties and procedures used in soil analyses. One or more field trips will be scheduled during laboratory sessions.

Prerequisites: Biology 2600, Earth Sciences 1000; one of Chemistry 2300, 2401, 2440 and 6 credit hours selected from Environmental Science Core (i.c.).

Lectures and Laboratory: Not more than six hours per week.

**4131 Environmental Restoration and Waste Management** is effective ecosystem restoration and remediation involves an interdisciplinary approach. This course will discuss procedures aimed at restoring and rehabilitating ecosystems, with an examination of the scientific basis underlying these procedures. The efficacy of management options, e.g. biomanipulation, microbial degradation and chemical treatments, involved in restoration and waste management will be evaluated. Applications and practical case studies of both aquatic and terrestrial ecosystems will be covered.

Prerequisites: Biology 2600, one of Chemistry 2300, 2401, 2440 and 6 credit hours from Environmental Science Core (i.c.).

Lectures: Three hours per week.

**4479 Groundwater Flow** is groundwater in the hydrologic cycle. Principles of fluid flow through permeable media. Hydraulic properties of soil and rock formations. Groundwater at the local and regional scale. The unit basin model. Groundwater as a transport agent of chemicals and microbes. Groundwater resources, reservoir characterisation, and quality assessment. Groundwater contamination.

Prerequisite: Environmental Science 3470 or the permission of the instructor and Program Chair.

Lectures: Three hours per week.

**4950 Research Project in Environmental Science I** is a course, with the guidance of a faculty member, where students will conduct a scientific study based upon original research or a critical review of extant data in an appropriate area. Students are required to submit a report and give a presentation.

Prerequisite: Permission of Program Chair.

Note: *This project fulfills the Core requirement for a fourth-year individual project in the area of specialization.*

**4951 Honours Project in Environmental Science I** is a course, under the guidance of a designated supervisor (or supervisors), where the student will prepare a thesis proposal including a comprehensive literature review of the subject of their Honours thesis. Students will present the results of their work in both written and oral form.

Prerequisites: This course is restricted to Environmental Science students who have been accepted into the Honours option.

**4959 Research Project in Environmental Science II** is a continuation of Environmental Science 4951 specifically for Honours students. Under the supervision of faculty member(s), students will carry out an original research project in environmental science. Students will present both a thesis and seminar on their research.

Prerequisite: Environmental Science 4951.

Note: *This course is restricted to honours candidates.*

## 10.12 Environmental Studies Courses

### New Course Numbering

For existing Memorial University of Newfoundland courses the numbers remain the same. For new courses in Environmental Studies the following scheme is used.

1st digit = year

2nd digit = Program Concentration

0 = common to both concentrations

1 = Environmental Perspectives Concentration

2 = Outdoor Environmental Pursuits Concentration

9 = Project

**1000 An Introduction to Environmental Studies** is an introduction to a variety of major issues in environmental studies through an examination of a range of case studies including both local problems, such as the impact of outdoor recreation activities on the environment, and global threats, such as stratospheric ozone depletion.

Prerequisites: None.

Lectures: Three hours per week.

**2000 Introduction to Mapping, Remote Sensing, and Geographical Information Systems** is an introduction to maps, global positioning systems, remote sensing, and geographic information systems. Applications to a broad range of environmental issues will be discussed.

Three hours of lectures and three hours of laboratory per week.

Prerequisites: Geography 1000 or Earth Sciences 1001.

**2210 Outdoor Environmental Pursuits I** is the theoretical rationale and practical skills needed to demonstrate basic proficiency in several of the following activities: minimal impact camping, wilderness cooking, hiking, kayaking, canoeing, navigating with map and compass, outdoor safety, search and rescue, and group management. The major focus of this course will be the practical application of learned skills.

Classes: Three hours of lectures and three hours of practicum per week.

Co-requisite: Basic first aid and CPR course.

Note: *Attendance is required.*

**2220 Outdoor Environmental Pursuits II** is the theoretical rationale and practical skills needed to demonstrate basic proficiency in several of the following activities: cross-country skiing, telemark skiing, downhill skiing, snowshoeing, winter camping, and winter survival techniques. The major focus of this course will be the practical application of learned skills.

Lectures: Three hours of lectures and three hours of practicum per week.

Note: *Attendance is required.*

**3000 Issues in Environmental Economics** is an analysis of current issues concerning the effects of the economic activities of production and consumption on the natural environment. The concepts of scarcity, abundance, demand, supply, opportunity cost, trade-offs, externalities, marginal benefits and marginal costs will be utilized in examining environmental problems. The social and economic implications of various approaches will also be analyzed.

Prerequisite: Economics 2010.

Lectures: Three hours per week.

**3001 Environmental and Resource Management: Applications of Geographic Information Systems** is applied GIS knowledge and skills in environmental and resource management. The topics cover GIS data sources, data conversions, database design, spatial analysis and decision support systems. Examples of GIS applications in the private and public sectors will be provided.

Lectures: Three hours per week.

Laboratory: Three hours per week.

Prerequisite: Environmental Studies 2000. Introduction to Mapping, Remote Sensing and Geographical Information Systems.

**3210 Expedition** will consist of one or more extensive expeditions into wilderness areas. A variety of applied topics related to environmental issues, outdoor leadership, and outdoor survival will be covered using an experiential approach.

Expedition: Two weeks (Summer term).

Prerequisites: Environmental Studies 2210 and 2220.

Note: *Attendance is required.*

**4000 Environmental Impact Assessment** will include an analysis of the different methods of assessing the impacts that investment projects or decision-making processes have on the environment. Environmental Impact Assessments (EIAs) vary with individual projects and are a vital tool to use in integrated planning of development proposals, policies and programs. Emphasis will be given to assessing the socio-economic impact of development projects.

Lectures: Three hours per week.

**4010 Seminar in Environmental Studies** is a senior seminar in which selected environmental issues will be examined from several disciplinary perspectives.

Prerequisite: Permission of the Environmental Studies Program Chair.

Seminars: Three hours per week.

### 4020-4039 Special Topics in Environmental Studies

Note: *Normally taken by students beyond the second year.*

**4950 Independent Research Project** is a course, under the supervision of a faculty member, where each student will carry out an approved project in environmental studies and prepare a major paper based on independent research.

Prerequisite: Permission of the Environmental Studies Program Chair.

## 10.13 Folklore

Folklore 1000 (or 2000) is the prerequisite for all other courses in Folklore, except 1050, 1060 and those courses cross-listed with other subject areas.

**1000 Introduction to Folklore** is the role that tradition plays in communication, art and society will be discussed through an examination of folklore materials from Newfoundland and the English-speaking world. Readings and "listenings" will emphasize the use of folklore in context, e.g., the proverb in speech and the folksong in childrearing. Students will be urged to analyze the traditions in their own lives through special assignments.

Lectures: Three hours per week.

Note: *A student may not receive credit for both Folklore 1000 and 2000.*

**1050 Folklore Studies** is an examination of specific folklore studies illustrating important themes and approaches in folkloristics. These will include antiquarian, nationalistic, diffusionist, historic-contextual, functional, structural, and performance analyses as typified in selected readings from the works of leading folklorists.

Note: *There is no prerequisite for this course. However, students should note that they will need to take Folklore 1000 (or 2000) before they can advance to other courses.*

**2100 Folklore Research Methods - An Introduction** is designed to provide the basic introduction to the research resources, tools and methods regularly employed in the area of Folklore. On the one hand, the course will examine what types of Library and Archive resources can be useful to the folklorist and, on the other hand, it will explore how folklorists in fieldwork situations should handle people, and how they can capture for posterity a record of the interviews that they have conducted and the events that they have observed.

Note: *It is strongly recommended that majors and minors take this course before taking 3000 and 4000 level courses.*

**2230 Newfoundland Society and Culture** (same as Sociology/Anthropology 2230) is the Sociology and Anthropology of the Island of Newfoundland. The focus is on social and cultural aspects of contemporary island Newfoundland.

**2300 Newfoundland Folklore** (same as Anthropology 2300) is survey of the various types of Folklore: tale, song, rhyme, riddle, proverb, belief, custom, childlore and others, with stress on their function in the Newfoundland community culture. Individual collection and analysis of materials from the students' home communities, supplemented by data from the this University's Folklore and Language Archive.

Prerequisite: Folklore 1000 or 2000, or Anthropology 1031.

Note: *Credit may not be obtained for both Folklore 2300 and the former Folklore 3420.*

**2401 Folklife Studies** is an examination of the traditional cultures of Europe and North America with special reference to Newfoundland. A selection of the following areas will be covered: settlement patterns, architecture, work and leisure patterns in the folk community, calendar customs, rites of passage, folk religion, folk medicine, language and folk culture, folk costume, foodways and folk art.

Note: *Credit may not be obtained for both Folklore 2401 and the former Folklore 3500.*

**2500 Folk Literature** (same as Anthropology 2500) is an examination of the major genres of folk literature: folk narrative, folk poetry and song, folk drama, and the traditional generic forms within folk speech. An introduction

to the textual, comparative and contextual methods of analysis. The literature discussed will be international in scope.

Prerequisite: Folklore 1000 or 2000, or Anthropology 1031.

Note: *Credit may not be obtained for both Folklore 2500 and any of the former Folklore 3400, English 3400, Sociology/Anthropology 3400.*

**2600 Regional Folklore** is an examination of human-environment relationships as expressed in traditional culture. Emphasis will be placed upon the history of regional folkloristics as well as the theories and methods of studying folklore from a regional perspective.

Prerequisite: Folklore 1000 or 2000 or instructor's permission.

**3130 Greek and Roman Mythology** (same as Classics 3130)

**3200 Folksong** is an introduction to the full range of traditional verse, song and music. Stress primarily on the songs of Canada, the United States and the British Isles, with attention to Newfoundland parallels. Examination of traditional vocal and instrumental styles as well as verse forms. Some reference to non-Western musical traditions. A knowledge of music is not a prerequisite.

Note: *Credit may not be obtained for both Folklore 3200 and the former Folklore 2430.*

**3300 Folk Drama** is a survey of the main forms of traditional drama found in Great Britain and North America with reference to related European and non-western traditions. The origins, history and regional variations of these forms will be considered together with questions of social function, performance and aesthetics. The history of research in the area of folk drama will be examined along with related methodological and theoretical issues.

**3601-3620 Special Topic in Folklore**

**4300 Folklore of Canada** is an examination of a variety of Canadian folklore from historical, geographical and cultural perspectives. Emphasis will be placed upon the application of theories of Canadian culture to folklore studies. Questions of the role of folklore and folklife with respect to identity, ethnicity, multiculturalism, national literature, regionalism and similar issues will be considered.

Note: *Credit may not be obtained for both Folklore 4300 and the former Folklore 1020.*

**4440 Music and Culture** (same as Anthropology 4440 and Music 4440) is traditional music as an aspect of human behaviour in Western and non-European cultures. Examination of the functions and uses of music; folk-popular-art music distinctions; and the relation of style to content. Outside reading, class exercises and individual reports will be required.

## 10.14 Forestry

**1001 Forestry Field Camp I** - inactive course.

**1010 and 1011 Introduction to Forestry** will introduce the many aspects of the professional practice of forestry including the multi-dimensionality of forest values and forest management as a design challenge. A problem based approach to learning is used to create learning objectives for the remainder of the program; to begin development of quantitative and qualitative skills; to instill the habit of inquiry and to begin development of understanding of social/ethical issues in forestry.

Forestry 1010 is a prerequisite to Forestry 1011.

Lectures: Three hours per week.

Laboratory: Three hours per week.

**1900 Developing Proficiency in Communications** is the improvement of the communication competency of beginning forestry students. The course will focus on both the written and oral, with emphasis on the former. Forestry 1900 will be linked with the content of Forestry 1010 and 1011.

Lectures: Four hours per week.

Note: *Credit may not be obtained for both Forestry 1900 and Business 2000.*

**2001 Forestry Field Camp II** - inactive course.

**2221 Physiological Ecology of Forest Vegetation** - inactive course.

**2222 Forest Climatology** - inactive course.

**2223 Forest Dynamics and Management** - inactive course.

**2224 Forest Management Concepts, Human Intervention and the Forest Community** - inactive course.

**2225 Forest Soils** - inactive course.

## 10.15 French

Note: *Three consecutive credit courses in French language are available at the first-year university level, providing a complete overview of basic oral and written French. New students may choose to register initially in French 1500 or 1501; a diagnostic test is offered to assist students with initial course selection or to confirm that initial course selection is appropriate. Students with a limited background in French should register for French 1500 and continue with 1501. Students with a strong background in high-school French should bypass 1500 and begin their university study with 1501, especially if they intend to*

*proceed beyond the first-year level. Very well prepared students may apply to the Department for permission to enter 1502 directly. Bypassing one or more of these courses may enable students to include a larger number of advanced electives in their degree program. French 1500, 1501 and 1502 require three hours of instruction per week and two additional hours of language laboratory work or conversation class, or both.*

**1500 Introduction à la langue française, niveau universitaire I**

Voir ci-dessus la note 1.

Note: *Les étudiants ne peuvent obtenir de crédit pour Français 1500 et l'un ou l'autre des cours Français 1010 et 1011 (désormais supprimés).*

**1500 Introductory University French I**

See Note 1 above.

Note: *Students may not receive credit for both 1500 and the former French 1010 or 1011.*

**1501 Introduction à la langue française, niveau universitaire II**

Voir ci-dessus la note 1.

Note: *Les étudiants ne peuvent obtenir de crédit pour Français 1501 et Français 1050 (désormais supprimé).*

**1501 Introductory University French II**

See Note 1 above.

Note: *Students may not receive credit for both 1501 and the former French 1050.*

**1502 Introduction à la langue française, niveau universitaire III**

Préalable: 1501, ou la permission du chef de la division.

Voir ci-dessus la note 1.

Note: *Les étudiants ne peuvent obtenir de crédit pour Français 1502 et Français 1051 (désormais supprimé).*

**1502 Introductory University French III**

See Note 1 above.

Prerequisite: 1501, or by permission of the head of the division.

Note: *Students may not receive credit for both 1502 and the former French 1051.*

**2100 Français intermédiaire I** rédaction, grammaire et pratique orale.

Préalable: Français 1502.

**2100 Intermediate French I** is composition, grammar and practice in oral skills.

Prerequisite: French 1502.

**2101 Français intermédiaire II** continuation du travail de rédaction, de grammaire et de communication orale.

Préalable: Français 2100.

**2101 Intermediate French II** is further work in composition, grammar and oral skills.

Prerequisite: French 2100.

**2300 Phonétique** introduction pratique à la phonétique du français. Emploi des symboles de l'alphabet phonétique, transcription phonétique et phonétique corrective.

Préalable: Français 1502 ou équivalent.

**2300 Phonetics** is a practical introduction to French phonetics, including the International Phonetic Alphabet and phonetic transcription as well as corrective phonetics.

Prerequisite: French 1502 or equivalent.

**2601 Apprentissage de la lecture** les étudiants exploreront des stratégies de lecture qui faciliteront la compréhension de textes divers. Ce cours sera normalement enseigné en français.

Préalables: Français 1502 ou Français 2159, ou équivalent.

Note: *Les étudiants ayant complété Français 2550 peuvent suivre Français 2601 OU Français 2602, mais pas les deux. Les étudiants ayant complété Français 2551 peuvent suivre Français 2601 OU Français 2602, mais pas les deux. Les étudiants ayant complété Français 2550 et Français 2551 ne peuvent suivre ni Français 2601 ni Français 2602.*

**2601 Reading Skills** will explore reading strategies in a variety of texts in French. This course will normally be taught in French.

Prerequisites: French 1502, or French 2159 or equivalent.

Note: *Students who have successfully completed French 2550 may take EITHER French 2601 or French 2602, but not both. Students who have successfully completed French 2551 may take EITHER French 2601 or French 2602, but not both. Students who have completed both French 2550 and 2551 may not take either French 2601 or French 2602.*

**2602 Lecture de textes intégraux** les étudiants exploreront des stratégies de lecture qui faciliteront la compréhension de textes intégraux. Ce cours sera normalement enseigné en français.

Préalables: Français 1502, ou Français 2159 ou équivalent.

Note: *Les étudiants ayant complété Français 2550 peuvent suivre Français 2601 OU Français 2602, mais pas les deux. Les étudiants ayant complété Français 2551 peuvent suivre Français 2601 OU Français 2602, mais pas les deux. Les étudiants ayant complété Français 2550 et Français 2551 ne peuvent suivre ni Français 2601 ni Français 2602.*

**2602 Reading Complete Texts** will explore reading strategies in a variety of complete texts in French. This course will normally be taught in French.

Prerequisites: French 1502, or French 2159 or equivalent.

Note: *Students who have successfully completed French 2550 may take EITHER French 2601 or French 2602, but not both. Students who have successfully completed French 2551 may take EITHER French 2601 or French 2602, but not both. Students who have completed both French 2550 and 2551 may not take either French 2601 or French 2602.*

**3100 Grammaire et analyse de textes** révision des catégories nominale et verbale du français (morphologie, nombre, genre, temps, aspect, mode, voix). Analyse grammaticale et stylistique des textes avec un accent particulier sur l'emploi du verbe en français. Travaux d'expansion lexicale.

Préalables: Français 2101 ou 2160 et au moins un autre cours de français de niveau 2000.

**3100 Grammar and Textual Analysis** is revision of the French noun and verb systems (morphology, number, gender, tense, aspect, mood, voice). Grammatical and stylistic textual analysis with special emphasis on the use of verbs in French. Vocabulary enrichment.

Prerequisites: French 2101 or 2160 and at least one other 2000-level course in French.

**3101 Stylistique et analyse de textes** rôle et fonction des parties du discours; exploitation sémantique (synonymie, polysémie); tropes et figures de style. Analyse grammaticale et stylistique de textes avec un accent particulier sur ces phénomènes. Travaux d'expansion lexicale.

Préalables: Français 2101 ou 2160 et au moins un autre cours de français de niveau 2000.

**3101 Stylistics and textual analysis** is role and function of the parts of speech in French; semantic enrichment (synonymy, polysemy); tropes and figures of speech. Grammatical and stylistic textual analysis with special emphasis on these phenomena. Vocabulary enrichment.

Prerequisites: French 2101 or 2160 and at least one other 2000-level course in French.

## 10.16 Geography

Geography 1000 and 1001 are understood to be equivalents to the former 1010 and 1011.

**1000 Introduction to Geography I** is an introduction to Geography incorporating concepts, skills and techniques used by the geographer to understand the Earth as the home of man. The major emphasis of the course is placed on man-environmental ecological systems. The course will include seminars and practical work.

**1001 Introduction to Geography II** is a continuation of introduction to basic concepts and techniques in the field of Geography. This course emphasizes Geography as a social science and introduces the sub-fields of political, economic, cultural and urban Geography. The course will include seminars and practical work.

Note: *Credit may not be obtained for both Geography 1001 and the former Geography 1011.*

**2001 Cultural Geography** is an examination of the basic themes of cultural Geography.

Prerequisite: Geography 1050, or the former 1011, or 1001.

**2102 Physical Geography: The Global Perspective** is a study of form, process, and change in natural systems at and near the surface of Earth, viewed as human environment. Emphasis is on global and regional scales in the systematic study of climate, water, landforms and vegetation.

Three hours of lecture and three hours of laboratory per week.  
Prerequisites: Geography 1000 or Geography 1050, or the former Geography 1011.

**2302 Issues in Economic Geography** are basic issues and ideas in economic geography. The development of a regional economy will be related to underlying economic, cultural and physical factors.

Prerequisite: Geography 1050, or the former 1011, or 1001.

**2425 Natural Resources** (formerly 3325) is an introduction to the concepts of natural resources, environment and conservation: the nature and distribution of natural resources; methods of use, allocation and development of natural resources and the role of various physical, social, economic, political and technological factors influencing decision-making about resources.

Prerequisite: Geography 1050, or 1011, or 1001.

Note: *Credit may not be obtained for both Geography 2425 and 3325.*

**3222 Research Design and Quantitative Methods in Geography** is an introduction to principles of research design, and to the use of quantitative techniques. This course provides students with a basic understanding of data collection, entry, and analysis and presentation skills most commonly used by geographers.

Practical, computer-based exercises are an essential part of the course.

Three hours of lecture and three hours of laboratory per week.

Prerequisite: Geography 1050, or the former 1011, or 1001 and at least 9 credit hours from Geography 2001, 2102, 2195, 2302, 2425.

Note: *It is strongly recommended that this course be completed before registration in a 4000-level geography course. Credit may not be obtained for both Geography 3222 and the former Geography 2220,*

*and Statistics 2500 or 2510.*

**3900-3909 Special Topics in Geography** will have topics to be studied announced.

Prerequisite: Permission of the instructor and the Head of the Department.

## 10.17 History

**1100 Introduction to History** is an introduction to the study and writing of history which will emphasize the concepts of history through a thematic approach to the history of western civilization from ca. 1500 to ca. 1815. (Offered only at Sir Wilfred Grenfell College.)

Note: *This course may not be taken for credit by students who have completed History 1000.*

**1101 Introduction to History** is an introduction to the study and writing of history which will emphasize the concepts of history through a combination of research and writing within a thematic approach to the history of western civilization from ca. 1815 to the present. (Offered only at Sir Wilfred Grenfell College.)

Note: *This course may not be taken for credit by students who have completed History 1001. Students in their first year normally take History 1100 and History 1101.*

**2035 History of Classical Greece** (same as Classics 2035) is survey of Greek history from the Bronze Age to the death of Alexander the Great, with special reference to the social and political institutions of the fifth century B.C.

Note: *Students who have completed History/Classics 2030 since 1985-86 or the former History/Classics 3910 may not also receive credit for History/Classics 2035.*

**2040 History of Rome** (same as Classics 2040) is a survey of Roman history from the early monarchy to the reign of Constantine, with special reference to society and politics in the late Republic and early Empire.

Note: *Students who have completed History/Classics 3920 may not also receive credit for History 2040.*

**2100 Empires of the North Atlantic, 1500-1820** will examine European expansion across the Atlantic to North America, the attempt to take possession of that continent through commercial investment and colonies, and the way in which European colonies were transformed into new societies.

**2120 The History of Canadian-American Relations, 1783 to the Present** is a survey of the major themes in the history of Canadian-American relations, from the American Revolution to the present. Emphasis will be placed on economic, social, political and cultural developments.

**2200 Canadian History to Confederation, 1867** is a survey of Canadian History to Confederation, 1867.

**2210 Canada Since 1867** is survey of Canadian History since Confederation.

**2300 Introduction to Modern European History: 1500-1789** is an introduction to the main issues and problems in early modern European History with an emphasis on the political, social, economic and cultural developments from the sixteenth through the eighteenth century.

**2310 Europe in the Nineteenth Century: 1789-1914** is a survey of the economic, social, political and cultural developments of Europe from 1789-1914.

**2320 Medieval Europe to 1050** is a survey of the economic, social, political and cultural developments of the early Middle Ages.

Note: *Credit may not be obtained for both History 2330 and the former History 2030.*

**2330 Medieval Europe, 1050 to the Reformation** is a survey of the economic, social, political and cultural developments of Europe in the high and late Middle Ages.

Note: *Credit may not be obtained for both History 2330 and the former History 2030.*

**2500 The Twentieth Century I** is a study of the world-wide impact of the main events and developments in the age of global interdependence.

Note: *Credit may not be obtained for both History 2500 and the former History 3700.*

**2700 Art History Survey I** (same as Visual Arts 2700) is the history of art from pre-historic times to the Renaissance.

**2701 Art History Survey II** (same as Visual Arts 2701) is the history of art from the Renaissance to the 20th century.

**3050 History of Warfare to 1789** is a survey of major developments in the history of warfare from the earliest times to 1789 with particular emphasis on changes in the nature and conduct of warfare, the evolution of military thinking, the organization of military and naval forces, the impact of technological change, the emergence of professionalism and the relationship between societies and armed forces.

**3060 History of Modern Warfare since 1789** is an examination of those major developments which have affected the nature and conduct of warfare in the period since 1789, with particular emphasis on the evolution of military

thinking, the impact of technology on organization and planning, the role of air power, the civil-military relationship, professionalism in the armed forces, and the changing nature of warfare: the emergence of total war, global war, guerilla warfare, and limited warfare.

**3110 History of Newfoundland to 1815** is the growth of settlement and the manner in which a 'migratory' fishery carried on from England and Ireland changed into a 'sedentary' fishery carried on by residents of Newfoundland.

**3120 Modern Newfoundland Since 1815** is the establishment and development of political institutions, changes in economic structure and the growth of populations.

**3250 Migration History of North America** is a survey of migration to and within North America from the seventeenth to the twentieth century.

**3440 History of the British Empire and Commonwealth since 1815** is the transition from British Empire to Commonwealth of Nations.

**3450 British History: 1485-1714** is the emergence of Britain under the Tudors and early Stuart monarchs.

**3460 British History Since 1714** is British History from the accession of the Hanoverians to the welfare state.

**3490 History of Ireland Since the Great Famine** is a survey of Irish history from the mid-nineteenth century to the present.

Note: *Credit may not be obtained for both History 3490 and the former History 3470.*

**3520 The Early Ethnohistory of North America's Native People** (same as Anthropology 3520) is the North American native response to early European contact and initial settlement. Particular attention will be paid to cultural change resulting from the adoption of European goods, participation in the fur trade, the introduction of European disease, and the adaptation to a permanent European presence.

**3525 The Later Ethnohistory of North America's Native People** (same as Anthropology 3525) is Indian and Inuit cultural history of the Eighteenth and Nineteenth centuries, including the fur trade, resistance and accommodation to European expansion, the emergence of revitalization movements, demographic changes, and population shifts. Special emphasis will be placed on the ethnohistory of the native peoples of what is now Canada and northern United States.

**3700 Art History: The Italian Renaissance** (same as Visual Arts 3700) is an overview of the art and architecture of Renaissance Italy with an emphasis upon the historical context in which art was produced.

**3701 Art History: The Renaissance Outside Italy** (same as Visual Arts 3701) is the Renaissance outside Italy from the late Fourteenth century and the international style through the 16th century.

**3770 Women in Western Society and Culture (II)** are selected themes in the history of women in the modern period with a focus on cultural attitudes toward women, demographic trends affecting women, the impact of changing economic roles, and the development of feminism.

Note: *Credit may not be obtained for both History 3770 and the former History 3761.*

**3840 Historical Methods** is an introduction to the methods and practices of history in the modern era. This course is compulsory for Honours students and recommended for Majors, including those intending to apply for graduate studies.

For Historical Studies students (Sir Wilfred Grenfell College): This course is required for all majors and minors.

Prerequisite: Twelve credit hours in history including History 1100/1101 or permission of the instructor.

Note: *Credit may not be obtained for both History 3840 and the former History 4801.*

**4230 Special Topics in Newfoundland History I** are specialized studies in the History of Newfoundland.

**4231 Special Topics in Newfoundland History II** are specialized studies in the History of Newfoundland.

Note: *Credit may not be obtained for both History 4231 and Political Science 4731.*

**4254 Special Topics in Canadian History: A History of Social Welfare** is a study of the broad theme of the state and social welfare in Canada. It examines the origins of modern forms of social control as evidenced in the nineteenth century prison, the lunatic asylum, and the poorhouse. As well, it compares Canadian and British and American social welfare institutions and policies, and traces their historical evolution into the twentieth century.

**4320 Special Topics in European History: The British Empire, 1688 to the Present**

**4410-4430 Historical Problems** are specialized studies in historical problems.

**4560-4570 Special Topics in Social and Intellectual History** are specialized studies in social and intellectual history.

**4730 Art History: Modern Art I** (same as Visual Arts 4730) is an examination of the cultural, social, and political forces which, from 1750 to 1850, were to have a major impact on modernity and later modern art.

Prerequisites/Co-requisites: Six credit hours in art history or permission of the chair of the Visual Arts Program.

**4731 Art History: Modern Art II** (same as Visual Arts 4731) is an examination of the various cultural and social forces between 1850 and 1914 which shaped the rise of the Modern movement.

Prerequisites/Co-requisites: Six credit hours in art history or permission of the chair of the Visual Arts Program.

**4821 Reading Course (F & W)** is a directed reading course for Honours and selected students including those intending to apply for graduate studies. Readings will be taken from a list of significant works in History, the Humanities, and the Social Sciences.

Prerequisite: Permission of the Program Chair.

**4950 Independent Project in Historical Studies** will have students complete an independent research project under the supervision of a faculty member or members. Topics must have the approval of the Program Chair of History.

Prerequisite: Students must normally have taken History 3840 and nine other History courses.

## 10.18 Human Kinetics and Recreation (HKR)

**3555 Outdoor Recreation Management** is an overview of outdoor recreation practices in Newfoundland and Canada. This course will examine the management of resources, conservation education and practices, development for public use or exclusion; legislation related to management of risk; viability of facilities; national and provincial agencies; private commercial ventures; and future trends in management. Management strategies will form a major part of the course.

Lectures: Three hours per week.

Note: *Credit maybe obtained for only 1 of HKR 3555, the former RECR 3555, and the former PHSD 3550.*

**3565 Tourism/Commercial Recreation** will examine behavioral factors influencing tourism; promotion of commercial recreation attractions; provincial strategies in travel and tourism; problems of leisure travel; stability of entrepreneurial ventures in tourism; and research and planning strategies relevant to commercial ventures.

Lectures: Three hours per week

Note: *Credit maybe obtained for only 1 of HKR 3565, the former RECR 3565, and the former PHSD 3560.*

**4555 Leadership and Supervision in Recreation** is need, selection, training and supervision of leaders in recreation. Certification, standards and professional organizations. Evaluation of leadership - materials and methods used. Practical exposure to roles of both leader and supervisor through seminar and related fieldwork.

Lectures: Three hours per week.

Note: *Credit maybe obtained for only 1 of HKR 4555, the former RECR 4555, and the former PHSD 4550.*

**4575 Recreation Ethics, Issues and Trends** will explore contemporary trends and issues identified by governments and recreation practitioners and the way in which these issues influence the delivery of leisure services.

Lectures: Three hours per week.

Note: *Credit maybe obtained for only 1 of HKR 4574, the former RECR 4575, and the former PHSD 4570.*

## 10.19 Humanities

**3000 Perspectives in Humanities** will explore the role played by the Humanities in the history of Western Civilization. It will introduce the student to the various interpretations of human experience and activities as provided by the disciplines that belong to Humanities.

Prerequisite: Six credit hours at the 2000-level in any of the Humanities Disciplines.

Note: *Humanities 3000 will be available to all students (subject to the above prerequisite) at Sir Wilfred Grenfell College.*

**4000 Concepts and Issues in Humanities** is a seminar course in which themes having common interest to the Humanities will be discussed from the perspectives of the various disciplines.

Prerequisite: Humanities 3000 or the permission of the Chair of Humanities.

Note: *Humanities 4000 is open only to students enrolled in the Humanities Program.*

**4950 Independent Project in Humanities** will complete an independent research project under the supervision of a faculty member or members. Topics must have the approval of the Program Chair of Humanities.

## 10.20 Mathematics and Statistics

### REGULATIONS

At most 9 credit hours in Mathematics will be given for courses completed from the following list subject to normal credit restrictions: 1000, 1031, 1050, 1051, 1080, 1081, 1090, 1150, 1151.

**102F, 103F and 104F Mathematics Skills Program** are non-credit courses



intended for those students who either have a weak background in mathematics or are returning to the subject after some years. The program enables students to master mathematical operations such as those involving whole numbers, fractions, decimals, percents, integers, exponents, linear equations, algebraic and rational expressions, formulas, graphs, systems of linear equations, basic trigonometry, exponents and radicals, and quadratics.

**1000 Calculus I** is an introduction to differential Calculus including logarithmic, exponential and trigonometric functions.

Three hours of lecture per week and one and one-half hour laboratory period per week.

Prerequisite: Mathematics 1090 or a combination of placement test and high school Mathematics scores acceptable to the department.

Note: *Effective Winter 2000, the credit restriction between Mathematics 1000 and Mathematics 1080 has been lifted. However, credit cannot be obtained for both Mathematics 1000 and Mathematics 1081.*

**1001 Calculus II** is an introduction to integral Calculus with applications. In addition to three lectures per week there will be a one and one-half hour problem lab.

Prerequisite: Mathematics 1000 or 1081.

Note: *Credit cannot be obtained for both Mathematics 1001 and either Engineering 1411 or Engineering 2413.*

**1050 Finite Mathematics I** covers topics which include sets, logic, permutations, combinations, and elementary probability.

Three hours of lecture per week and a one and one-half hour laboratory period per week.

Prerequisite: A combination of placement test and high school mathematics scores acceptable to the department above, or Mathematics 103F.

Notes: 1. *With the exception of those already admitted at the time of registration in this course to a B.Ed. program that requires this course, students who already have obtained credit for 6 or more Mathematics credit hours numbered 2000 or above are not permitted to register for this course nor can they receive credit for it.*

2. *Credit cannot be obtained for Mathematics 1050 and the former Mathematics 1150.*

**1051 Finite Mathematics II** covers topics which include elementary matrices, linear programming, elementary number theory, mathematical systems and geometry.

Three hours of lecture per week and a one and one-half hour laboratory period per week.

Prerequisite: A combination of placement test and high school mathematics scores acceptable to the department (See regulation 1) above), or Mathematics 103F.

Notes: 1. *With the exception of those already admitted at the time of registration in this course to a B.Ed. program that requires this course, students who already have obtained credit for 6 or more Mathematics credit hours numbered 2000 or above are not permitted to register for this course nor can they receive credit for it.*

2. *Credit cannot be obtained for Mathematics 1051 and the former Mathematics 1151.*

**1090 Algebra and Trigonometry (F & W)** provides students with the essential prerequisite elements for the study of an introductory course in calculus. Topics include algebra, functions and their graphs, exponential and logarithmic functions, trigonometry, polynomials, and rational functions.

Three hours of lecture and a three hour laboratory period per week.

Prerequisite: A combination of placement test and high school Mathematics scores acceptable to the department or Mathematics 104F.

Note: *Students will not receive credit for Mathematics 1090 if they have previously received credit or are currently registered for Mathematics 1000, 1001, 1080, or 1081.*

**2000 Calculus III** is a study of the differential calculus of functions of two variables, an introduction to convergence of infinite sequences and series. In addition to three lectures per week there will be a one and one-half hour problem lab.

Prerequisite: Mathematics 1001.

Note: *Credit cannot be obtained for both Mathematics 2000 and any of Engineering 1411, Engineering 1412, Engineering 2412, Engineering 2413.*

**2050 Linear Algebra I** includes the topics of Euclidean  $n$ -space, vector operations in 2- and 3-space, complex numbers, linear transformations on  $n$ -space, matrices, determinants, and systems of linear equations.

Prerequisite: Mathematics 1000 or 6 credit hours in first year Mathematics courses.

Note: *Credit cannot be obtained for both Mathematics 2050 and Engineering 2402.*

**2051 Linear Algebra II** includes the topics of real and complex vector spaces, basis, dimension, change of basis, eigenvectors, inner products, and diagonalization of Hermitian matrices.

Prerequisite: Mathematics 2050.

**2090 Mathematics of Finance** covers the following topics: simple and compound interest and discount, forces of interest and discount, equations of value, annuities and perpetuities, amortization schedules and sinking funds, bonds and other securities, contingent payments.

Prerequisite: Mathematics 1001.

**2320 Discrete Mathematics** are basic concepts of mathematical reasoning, sets and set operations, functions, relations including equivalence relations and partial orders as illustrated through the notions of congruence and divisibility of integers, mathematical induction, principles of counting, permutations, combinations and the Binomial Theorem.

Prerequisite: Mathematics 1001 or 2050.

Note: *Credit cannot be obtained for both Pure Mathematics 2320 and Computer Science 2740.*

**2500 Statistics for Business and Arts Students** is descriptive statistics (including histograms, stem-and-leaf plots and box plots), elementary probability, discrete random variables, the binomial distribution, the normal distribution, sampling distribution, estimation and hypothesis testing including both one and two sample tests, paired comparisons, chi-square test, correlation and regression. Related applications.

Prerequisite: Mathematics 1000 or 6 credit hours in first year courses in Mathematics or registration in at least semester 3 of a B.N. program or permission of the head of department.

Note: *Credit can be obtained for only one of Statistics 2500, 2510, 2550, and Psychology 2900. Normally offered twice a year, including the fall. Statistical computer package will be used in the laboratory, but no prior computing experience is assumed.*

**2550 Statistics for Life Science Students** is an introduction to basic statistics methods with an emphasis on applications to life sciences and, in particular, to biology. Material includes descriptive statistics, elementary probability, binomial distribution, normal distribution, sampling distribution, estimation and hypothesis testing (both one and two sample cases), chi-square test, one way analysis of variance, correlation and simple linear regression.

Prerequisite: Mathematics 1000 or 1081.

Note: *Credit can be obtained for only one of Statistics 2500, 2510, 2550, and Psychology 2900. Statistical computer package will be used in the laboratory, but no prior computing experience is assumed.*

**3000 Real Analysis I (F & W)** is proof techniques, structure of  $\mathbb{R}$ , sequences, limits, continuity, uniform continuity, differentiation.

Three lecture hours and one laboratory hour per week.

Prerequisite: Mathematics 2000.

Note: *Credit can be obtained for only one of Mathematics 3000 and the discontinued 2001.*

**3202 Vector Calculus** is functions of several variables, Lagrange multipliers, vector valued functions, directional derivatives, gradient, divergence, curl, transformations, Jacobians, inverse and implicit function theorems, multiple integration including change of variables using polar, cylindrical and spherical co-ordinates, Green's theorem, Stokes' theorem, divergence theorem, line integrals, arc length.

Prerequisite: Mathematics 2000 and 2050.

Note: *Credit cannot be obtained for both Applied Mathematics/Pure Mathematics 3202 and Physics 3810.*

**3260 Ordinary Differential Equations I** is direction fields, equations of first order and first degree, higher order linear equations, variation of parameters, methods of undetermined coefficients, Laplace transforms, systems of differential equations. Applications include vibratory motion, satellite and rocket motion, pursuit problems, population models and chemical kinetics.

Prerequisite: Mathematics 2000.

Note: *Credit cannot be obtained for both Applied Mathematics/Pure Mathematics 3260 and Engineering 3411.*

**3320 Abstract Algebra** is an introduction to groups and group homomorphisms including cyclic groups, cosets, Lagrange's theorem, normal subgroups and quotient groups, introduction to rings and ring homomorphisms including ideals, prime and maximal ideals, quotient rings, integral domains and fields.

Prerequisite: Pure Mathematics 2320.

**3330 Euclidean Geometry** is classical Euclidean geometry of the triangle and circle. The inversion transformation, including the theorem of Feuerbach. Elliptic and hyperbolic geometries.

Prerequisite: Pure Mathematics 2320 or Mathematics 2051.

**3340 Introductory Combinatorics** includes Topics such as distributions, the binomial and multinomial theorems, Stirling numbers, recurrence relations, generating functions and the inclusion-exclusion principle. Emphasis will be on applications.

Prerequisite: Pure Mathematics 2320.

**3370 Introductory Number Theory** is perfect numbers and primes, divisibility, Euclidean algorithm, greatest common divisors, primes and the unique factorization theorem, congruences, cryptography (secret systems), Euler-Fermat theorems, power residues, primitive roots, arithmetic functions, Diophantine equations, topics above in the setting of the Gaussian integers.

Prerequisite: Pure Mathematics 2320.

**3410 Mathematical Statistics I** is basic probability concepts, combinatorial analysis, conditional probability, independence, random variable, distribution function, mathematical expectation, Chebyshev's inequality, distribution of two random variables, binomial and related distributions, Poisson, gamma, normal, bivariate normal,  $t$ , and  $F$  distributions, transformations of variables including the moment-generating function approach.

One and a half hour tutorial period weekly.

Prerequisite: Mathematics 2000.

## 10.21 Philosophy

In accordance with Senate's *Policy Regarding Inactive Courses*, the course descriptions for courses which have not been offered in the previous three academic years and which are not scheduled to be offered in the current academic year have been removed from the following listing. For information about any of these inactive courses, please contact the Head of the Division.

**1001 Philosophy of Human Nature** is an approach to philosophical thinking by way of analysis and critique of theories of human nature, classical and modern, and the world views associated with them.

**1200 Principles of Philosophy** is a general introduction to the study of Philosophy both as a contemporary intellectual discipline and as a body of knowledge. The course covers the main divisions, fundamental questions and essential terminology of Philosophy through a reading of classical texts (It is a required course for further courses in Philosophy programs. It is intended for students in first year who have completed one semester of university education).

**2200 Principles of Philosophy** (same as 1200 above but offered to students beyond first year)  
Note: *Credit may not be obtained for both 1200 and 2200.*

**2210 Logic** is an introduction to traditional and modern logic open in any year to all students wishing acquaintance with basic logical skills.  
No prerequisite.

**2220 Principles of Human Knowledge** are various concepts of knowledge - empirical, rational, transcendental, systematic. Their metaphysical grounds and implications. The concept of scientific knowledge; real and abstract entities; objectivity and subjectivity.

**2230 Moral Philosophy** is the sources and validity of ethical principles which underlie individual and social action.

**2701 History of Ancient Philosophy** (same as Classics 2701) is a survey of the origin and development of Western philosophy among the Greeks and Romans.

**2702 History of Modern Philosophy** is survey of the development of western Philosophy since the seventeenth century.  
Note: *Credit may be obtained for only ONE of 3700, 3701, 2702.*

**2800-2810 Contemporary Issues** is defined by its aim: to provide students with an opportunity to develop the philosophical dimension primarily, in areas of practical concern. Issues dealt with are chiefly contemporary ones: technology, bioethics, leisure, professional ethics, role of education, materialism, human rights and others of the kind.

**3400 Political Philosophy** is leading philosophical ideas concerning the origin and justification of political institutions.

**3600 Philosophy of the Humanities** is expression and interpretation in the humanistic disciplines: theology, history, art and literature, language. Philosophical Hermeneutics.

**3610 Philosophy and Literature** is a study of the interrelationship of thought and imagination in philosophical and literary forms of writing.

**3730 Plato** is selections from the works of the Greek "lovers of wisdom" - the first philosophers - particularly Plato.

**3740 Aristotle** is the works and legacy of perhaps the most influential systematic thinker of all time.

**3800 Descartes** is a systematic introduction to the works and thought of the "father of modern philosophy".

**3840 Hume** is a study of the work and influence of Hume on theories of knowledge, metaphysics and moral philosophy.

**3850 Kant's Theory of Knowledge** is an introduction to the work of one of the most influential thinkers of the modern era, concentrating on his theory of knowledge, particularly as stated in the Critique of Pure Reason.

**3860 Hegel** is selections from Hegel's system with emphasis on the nature of dialectical and speculative philosophy and its enormous influence in the present time.

**3940 Existentialism** is the philosophy and literature of Existentialism from Kierkegaard, Nietzsche and Dostoevsky to Sartre, de Beauvoir and Camus.  
Note: *Credit may not be obtained for both 3980 and 3940.*

**4250 Seminar in Metaphysics and Epistemology**

**4700 Seminar in Special Authors and Texts**

## 10.22 Physics

**1020 Introductory Physics I (F)** is a non-calculus based introduction to mechanics.  
Prerequisite: Level III Advanced Mathematics or Mathematics 1090. Mathematics 1090 may be taken concurrently. It is recommended that students have completed at least one of level II and level III high school physics courses, however this course may be completed by someone who

has no physics background provided some extra effort is made.

Lectures: Three hours per week.

Laboratory and/or Tutorial: Up to three hours per week.

**1021 Introductory Physics II (W)** is a non-calculus based introduction to fluids, wave motion, light, optics, electricity and magnetism.

Prerequisites: Physics 1020 or 1050 and Mathematics 1000. Mathematics 1000 may be taken concurrently.

Lectures: Three hours per week.

Laboratories: Normally six three-hour sessions per semester.

Tutorials: Optional tutorials will be available, on average one hour per week.

Note: *Credit can be obtained for only one of Physics 1021, 1051 and 1061.*

**1050 General Physics I: Mechanics (F)** is a calculus based introduction to mechanics. The course will emphasize problem solving.

Prerequisite: Mathematics 1000, which may be taken concurrently.

Lectures: Three hours per week.

Laboratories: Normally six three-hour sessions per semester.

Tutorials: Optional tutorials will be available, on average one hour per week.

**1051 General Physics II: Oscillations, Waves, Electromagnetism** is a calculus based introduction to oscillations, wave motion, physical optics and electromagnetism.

Prerequisites: Physics 1050 or 1020 (with a minimum grade of 65%) and Mathematics 1001. Mathematics 1001 may be taken concurrently.

Lectures: Three hours per week.

Laboratories: Three hours per week.

Note: *Credit can be obtained for only one of Physics 1021, 1051, and 1061.*

**2056 General Physics VI: Modern Physics (W)** is special relativity, quanta of light, atomic structure and spectral lines, quantum structure of atoms and molecules, nuclei and elementary particles.

Prerequisites: Mathematics 1001, Physics 1050 (or 1020 and 1021), and Physics 1054. Mathematics 1001 and Physics 1051 may be taken concurrently.

Lectures: Three hours per week.

Laboratory: Three hours per week.

Note: *Students may receive credit for only one of Physics 2056 and 2750.*

**2065 Experimental and Computational Physics** is laboratory techniques, including experimental method and design. Data analysis, including application of statistics to experimental physics. Numerical analysis using Maple, and an introduction to modeling in physics. Topics are introduced through experiments, complementary lectures, and library research of some of the great experiments of physics.

Lectures and laboratories: Six hours per week.

Prerequisites/Co-requisites: Physics 1061 (or 2054), Mathematics 1001, and Mathematics 2050 which may be taken concurrently.

Note: *Students who have completed Physics 1020/1021 will be allowed to register for Physics 2065 with the permission of the Instructor and the Program Chair.*

**2151 Stellar Astronomy and Astrophysics (W)** is atomic structure and spectra. The sun: radiation, energetics, magnetic field. Stars: distance, velocity, size, atmospheres, interiors. Variable stars, multiple stars, clusters and stellar associations. Stellar evolution, interstellar matter, structure of the Milky Way Galaxy. Exterior galaxies, quasi-stellar objects, pulsars. Cosmology.

Prerequisites: Six credit hours in Mathematics at the first year level.

Lectures: Three hours per week.

**3060 Electricity and Magnetism** is point charges; Coulomb's law; electrostatic field and potential; Gauss' law; conductors; magnetostatics; Ampere's law; Biot-Savart law; dielectric and magnetic materials; electrostatic and magnetostatic energy; Lorentz force; time varying fields; Faraday's law; Lenz's law; Maxwell's equations.

Lectures: Three hours per week.

Laboratories: Normally three hours per week.

Prerequisites/Co-requisites: Physics 1051 and Applied Mathematics 3260. Applied Mathematics 3260 may be taken concurrently.

**3160 Stellar and Galactic Astronomy** is the physics and mathematics of stars and galaxies. Orbits and the two-body problem, radiation and matter, theory of stellar atmospheres, structure and evolution of stars. Galaxies: Morphology and kinematics. Milky Way kinematics and structure, large-scale star formation, the distribution of interstellar matter in galaxies. Starburst and active galaxies. An introduction to cosmology.

Lectures: three hours per week.

Credit restrictions: Physics 3150, 3151.

Prerequisites/Co-requisites: Physics 2056, 2151 and Mathematics 2000. Physics 3220 is recommended.

**3220 Classical Mechanics I** is kinematics and dynamics of a particle. Moving reference systems. Celestial mechanics. Systems of particles.

Prerequisites: Physics 2820 and Applied Mathematics/Pure Mathematics 3260. 3260 may be taken concurrently.

Lectures: Three hours per week.

## 10.23 Political Science

**1000 Introduction to Politics** is an introduction to basic concepts in the study of politics, emphasizing the Canadian system of government and its relationship with the Canadian society.

**1010 Canadian Political Problems** is analysis of the operation of the

Canadian political system through close examination of three selected policy problems, such as poverty in Canada, Canadian-United States relations and French Canada.

**1020 World Political Problems** is an introduction to contemporary issues in world politics. The course will examine selected issues and the manner in which these reflect interests and ideologies and the larger political and economic context in which they occur.

**2000 Introduction to Political Thought** is a survey of the most important political thinkers and schools of political thought in the Western political tradition. The course will ordinarily cover political thinkers from Plato to Marx and include a selection of contemporary political ideologies.

**2200 Introduction to International Politics** is an examination of the "building blocks" of international politics including determinants, means, processes and ends. Emphasis is on the post-1945 period.

**2300 Introduction to Comparative Politics** is an introduction to comparative politics focusing on the differences and similarities among a variety of countries and systems.

**2500 Introduction to Political Behaviour** is an introduction to classics and controversies in the understanding of political behaviour. Topics include political culture and individual behaviour, public opinion, voting and elections, political participation, psychological dimensions of activism, and social movements.

**2710 Introduction to Canadian Politics I** is an introductory survey of the structure, operation, and inter-relationships of the institutions of government at the federal level in Canada. Topics to be examined include the constitution, federalism, parliament, the executive, and the judiciary.

Note: *Credit may not be obtained for either Political Science 2710 or 2711 and the former Political Science 2700.*

**2711 Introduction to Canadian Politics II** is an introductory survey of the Canadian political process. The course will explore the linkages between Canadian society and political institutions. Topics to be examined include political culture, political parties, the electoral system, voting behaviour, interest groups, the mass media and politics, protest movements, and elites and social classes.

Note: *Credit may not be obtained for either Political Science 2710 or 2711 and the former Political Science 2700.*

**3550 Politics and the Environment** is an examination of the environmentalist movement, interest groups, and green parties; the impact of environmentalism on conventional parties and public opinion; and the dynamics of support for and opposition to the achievement of environmentalist objectives.

Prerequisites: None.

Lectures: Three hours per week.

**3731 Environmental Policy** is an examination of the formation, implementation, and impact of public policies concerning the environment including an examination of different policy approaches and the problems of environmental regulation.

Prerequisites: None.

Lectures: Three hours per week.

## 10.24 Psychology

Psychology 1000 and 1001 are prerequisites for all Psychology courses.

**1000 and 1001 Introduction to Psychology** is an introduction to Psychology as a biological and social science. Topics shall include research methodology, physiological processes, perception, learning, memory and cognition, human development, animal behaviour, emotion, motivation, consciousness, personality and individuality, psychological disorders and treatment, and social psychology. Psychology 1000 is a prerequisite for Psychology 1001.

**2925 Research Methods and Data Analysis in Psychology I** will cover basic research methods and supporting statistical concepts and techniques. Basic methods will include observational techniques, correlational studies, and surveys. Supporting statistical concepts will include populations and samples, measures of central tendency and variability, basic probability, correlation, simple linear regression and validity and reliability. Supporting statistical techniques will include producing tables and graphs, and the calculation and interpretation of measures of central tendency, variability, probabilities, correlation, and simple linear regression. Students will also learn how to write a description of a simple study in basic APA style, and how to use a statistical package to analyze surveys and calculate correlation. Basic ethical principles in conducting research will be introduced. This course includes a weekly laboratory.

Prerequisites: Mathematics 1000 or any two of the following courses: Mathematics 1090, 1050, 1051.

Note: *Credit may not be obtained for Psychology 2925 and any of the following: Psychology 2900, Statistics 2500, Statistics 2510, Statistics 2550.*

**2950 Research Methods and Data Analysis in Psychology II** will cover basic experimental methods and supporting statistical concepts and techniques. Basic designs will include one factor designs (independent and repeated measures). Supporting statistical concepts will include statistical

sampling distributions (t and F), internal and external validity, hypothesis testing, and simple interactions. Supporting statistical techniques will include independent and repeated measures t-tests, one-factor independent and repeated measures ANOVA, and selected multiple comparisons techniques. Students will also learn how to write a description of an experiment in APA style, how to critically analyze a report of an experiment, how to use and interpret a statistical package to analyze experimental data, and how to conduct literature searches.

This course includes a weekly laboratory.

Prerequisite: Psychology 2925 or equivalent.

Note: *Credit may not be obtained for Psychology 2950 and any of the following: Psychology 2901, Statistics 2501, Statistics 2560.*

**3950 Research Methods and Data Analysis in Psychology III** will cover advanced research methods, including survey methods, and supporting statistical concepts and techniques. Designs will include single factor designs and multi-factor designs with both random and fixed factors. Supporting statistical concepts will include analysis of variance (ANOVA) from a linear model perspective, statistical power, and multiple regression, including model building. There may be a general introduction to multivariate statistical techniques. Ethical issues in research will be discussed in detail. Students will be required to design and carry out at least one research project from the design to the writeup stage, including an ethics review.

This course includes a weekly laboratory.

Prerequisite: Psychology 2950 or equivalent.

Note: *Credit may not be obtained for Psychology 3950 and any of the following: Psychology 3900, Statistics 3520, the former Psychology 3520.*

### 10.24.1 Survey Courses

**2025 Survey of Developmental Psychology** is a survey of the cognitive, social, and personality development of people. Development will be tracked from the prenatal stage to old age. Topics to be studied shall include: research methodology, genetics, prenatal development, environmental effects during prenatal development, attachment, emotional development, language development, intelligence, cognitive development, socialization, sex-roles and gender identity, adolescence, adulthood and aging.

Note: *Credit may not be obtained for Psychology 2025 and either of Psychology 2010 or 2011.*

**2125 Survey of Social Psychology** is a survey of how the behaviour of individuals is influenced by others. Topics to be studied shall include: methodology and ethics, social cognition, social perception, attitude formation and change, interpersonal attraction, social influence, group processes and leadership. Additional topics may include: aggression, prosocial behaviour, sex and gender, environmental effects, organizational behaviour, health, stress and psychology and the law.

Note: *Credit may not be obtained for Psychology 2125 and either of Psychology 2100 or 2120.*

**2225 Survey of Learning** is a survey of learning phenomena and learning theories. Topics to be studied shall include: the evolutionary context of learning, habituation and sensitization, imprinting, Pavlovian conditioning, instrumental learning, generalization and discrimination in learning and neural mechanisms of learning.

Note: *Credit may not be obtained for Psychology 2225 and either of Psychology 2240 or 2250.*

**2425 Survey of Cognitive Psychology** is a survey of how humans process and retain information. Topics to be studied shall include: perception and pattern recognition, attentional processes and memory. The influence of stored information on selected behaviours will be considered. Selected behaviours may include language processing, concept formation, problem solving, decision making and practised and skilled performance.

Note: *Credit may not be obtained for Psychology 2425 and either of Psychology 2440 or 3450.*

**2625 Survey of Personality** is a survey of the theories of personality and relevant selected areas of research in the area of personality. Issues related to the application of this information to understanding abnormal behaviour will also be discussed. Theoretical systems covered will include: psychodynamic theory, behaviourism and cognitive-behavioural theory, humanism, traits and dispositions, social learning theory, psychological constructivism, information processing and biological theories of personality.

Note: *Credit may not be obtained for both Psychology 2625 and any of the following: Psychology 2610, Psychology 2620, and the former Psychology 2200.*

**2825 Survey of Biological Psychology** is a survey of the biological bases of behaviour. Topics to be studied shall include: the structure and function of the nervous system, sensory structures and sensory coding, homeostasis, emotions, circadian rhythms and sleep, sexual behaviour, psychopharmacology, consciousness and language, behavioural evolution and behaviour genetics.

Note: *Credit may not be obtained for Psychology 2825 and either of Psychology 2810 or 2850.*

### 10.24.2 Contemporary Issues Courses

**3025 Contemporary Issues in Developmental Psychology**

Prerequisites: Psychology 2925 and Psychology 2025.

**3125 Contemporary Issues in Social Psychology**

Prerequisites: Psychology 2925 and Psychology 2125.

**3225 Contemporary Issues in Learning**

Prerequisites: Psychology 2925 and Psychology 2225.

**3325 Contemporary Issues in Sensation and Perception**

Prerequisites: Psychology 2925 and Psychology 2425 or 2825.

**3425 Contemporary Issues in Memory and Cognition**

Prerequisites: Psychology 2925 and Psychology 2425.

**3525 Contemporary Issues in Emotion**

Prerequisites: Psychology 2925 and any Survey Course in Psychology from the Sir Wilfred Grenfell College Psychology Program.

**3625 Contemporary Issues in Personality**

Prerequisites: Psychology 2925 and Psychology 2625.

**3626 Contemporary Issues in Abnormal Psychology**

Prerequisites: Psychology 2925 and Psychology 2625.

Note: *Credit may not be obtained for both Psychology 3626 and any of the following Psychology 3640, Psychology 3650, and the former Psychology 3600.*

**3627 Contemporary Issues in Psychotherapy**

Prerequisites: Psychology 2925 and Psychology 2625.

**3628 Contemporary Issues in Psychological Testing and Measurement**

Prerequisites: Psychology 2950 and any one of Psychology 2025, 2125, 2425, 2625.

**3725 Contemporary Issues in Animal Behaviour**

Prerequisites: Psychology 2925 and Psychology 2825 or Psychology 2225.

**3825 Contemporary Issues in Physiological Psychology**

Prerequisites: Psychology 2925 and Psychology 2825.

### 10.24.3 Senior Courses

**4910 Systems of Psychology** is a study of paradigms and explanations in contemporary psychology in the context of their historical antecedents.

Prerequisites: Seventy-eight credit hours in University courses including (a) 6 credit hours in Psychology laboratory courses from Clause 1(b) of the Requirements for a Major in Psychology or (b) Psychology 3425 or (c) Psychology 3950.

**4925 Senior Seminar in Psychology** is weekly seminars for faculty and senior students in Psychology. Current issues in academic and professional psychology shall be discussed.

Prerequisites: Thirty credit hours in Psychology including 3950 (or permission of the Chair of Psychology).

**4950 Independent Project in Psychology** is under the supervision of a Faculty member where students will independently carry out approved projects and prepare reports of their findings.

Prerequisites: Thirty credit hours in Psychology including 3950 (or permission of the Chair of Psychology).

Note: *Credit may not be obtained for both Psychology 4950 and Psychology 4951.*

**4951 Honours Project in Psychology I** is under the supervision of a Faculty member and each student will independently review an area of psychology and prepare a thesis proposal for further investigation.

Prerequisites: Thirty credit hours in Psychology including 3950 (or permission of the Chair of Psychology).

Notes: 1. *Credit may not be obtained for both Psychology 4950 and 4951.*

2. *Psychology 4951 is limited to Honours candidates.*

**4959 Honours Project in Psychology II** is a continuation of Psychology 4951. Under the supervision of a Faculty member, each student will independently carry out an approved project which will result in an honours thesis.

Prerequisite: Psychology 4951 (or the permission of the Chair of Psychology).

Note: *Psychology 4959 is limited to Honours candidates.*

### 10.25 Religious Studies

In accordance with Senate's *Policy Regarding Inactive Courses*, the course descriptions for courses which have not been offered in the previous three academic years and which are not scheduled to be offered in the current academic year have been removed from the following listing. For information about any of these inactive courses, please contact the Head of the Division.

Unless otherwise specified, Religious Studies courses do not have prerequisites. Students who register in a 3000- or 4000-level course are encouraged, however, to make sure that they have adequate preparation for that course, preferably by having completed a first- or second-year course in the field.

**1000 The Religions of the World** is an introduction to the basic beliefs and practices of the world's great religions.

Note: *Credit may not be obtained for both Religious Studies 1000 and the former Religious Studies 2010.*

**1032 Introduction to Asian Religions and Culture** is a broadly based survey course introducing students to the religions, culture, and societies of Asia. Traditions explored may include those of India (Hinduism, Buddhism, Sikhism, Jainism), China (Daoism, Confucianism, Buddhism), Japan (Shinto, Zen Buddhism), and Korea.

**2013 Introduction to Christianity** is a study of the Christian tradition, its development and variety. The course will include an examination of the beliefs and practices of both Eastern and Western Christianity and a study of the main differences among the major Western denominations.

**2050 Introduction to the Old Testament** is an introduction to the historical background, literary structure, and content of the Old Testament. Emphasis will be placed on the authorship and dating of the various texts that comprise the Old Testament, as well as on major themes, figures, and events. This course may qualify as a Research/Writing course. Consult each semester's registration materials for the R/W designation.

**2051 Introduction to the New Testament** is an introduction to the history and literary structure of the documents comprising the New Testament. Emphasis will be placed on the major themes found in these documents and on the distinctiveness of approach of the individual writers.

**2350 Religious Institutions** (same as Sociology/Anthropology 2350) is psychological, anthropological, and sociological approaches to the nature of religion. Comparative study of religious institutions and beliefs, calendrical feasts and solemnities, the nature of sacrifice and the sacred, religious roles and hierarchies, ritual innovation and revitalization.

**2400 Introduction to Buddhism** is a study of the history of the Buddhist tradition in India and China, the development of the main lines of Buddhist thought, and the nature of the Chinese transformation of Buddhism.

Note: *Credit may not be obtained for both Religious Studies 2400 and the former Religious Studies 3400.*

**2410 Introduction to Hinduism** involves a study of the religious thought and history of India, the literature of Hinduism, the major thinkers in Hindu philosophy, and the role of Hinduism in the culture and society of India.

Note: *Credit may not be obtained for both Religious Studies 2410 and the former Religious Studies 3410.*

**2610 Introduction to Religious Ethics** is an introduction to religious ethics through the systematic study of selected writers and issues in biomedicine, human sexuality, and social justice. Possible topics for discussion include euthanasia, abortion, poverty, and unemployment.

Note: *Students who have successfully completed both Religious Studies 2600 and Religious Studies 2601 may not receive credit for 2610.*

**3010 Greek Religion** (same as Classics 3010) is a study of the role of religion in the private and public life of the Greek world.

Note: *Students may not receive credit for Religious Studies/ Classics 3010 and the former Religious Studies/Classics 3121.*

**3020 Roman Religion** (same as Classics 3020) is a study of the role of religion in the private and public life of the Roman world.

Note: *Students may not receive credit for Religious Studies/ Classics 3020 and the former Religious Studies/Classics 3121.*

**3200 Jesus: His Life and Teaching** is a study of the ministry and thought of Jesus of Nazareth as contained in the Gospels and other New Testament writings. Attention will be given to the methods and conclusions of recent scholarship as applied to his principal teachings and to the study of the historical Jesus.

**3210 Paul and His Writings** is a study of the Pauline writings and an appraisal of the contribution to Christianity of his mission and theology on the basis of New Testament and other relevant material. Particular attention will be given to such related themes as salvation, reconciliation, grace, and justification.

**3310 Judaism at the Beginning of the Christian Era** will explore the developments in Jewish thought, institutions, beliefs, and practices during the time when Greek and Jewish cultures encountered one another and in which Jesus of Nazareth lived.

Note: *Credit may not be obtained for both Religious Studies 3310 and the former Religious Studies 3220.*

**3401 Zen, Buddhist Meditation, and Buddhist Psychology** examines the relationship between meditation and theories of human psychology in Buddhism from its origins to its formulation in Zen.

**3820 Religion and the Arts** (same as Visual Arts 3820) is an examination of the role of art in the expression of religious ideas, together with a study of specific religious themes and concerns in one or more of the following: literature, film, music, painting, sculpture and dance.

**3831 Religious Themes in Contemporary Songwriting** is a study of religious themes in contemporary songwriting through the in-depth examination of the work of a selection of contemporary songwriters. The course will explore how religious questions and themes are handled in contemporary song and explore how song as an artistic medium expresses religious meaning. Songwriters to be explored may include the following: Bob Dylan, Bob Marley, Joni Mitchell, Leonard Cohen, Van Morrison, Tori Amos, Nick Cave, Alanis Morissette, Julie Miller, the Louvin Brothers, the Stanley Brothers, Hank Williams, etc.

**3880 Spirituality and the Earth** is an examination of the attitudes of various

religious traditions to the environment. Special attention will be paid to Native American spirituality.

Prerequisites: Three credit hours in Religious Studies beyond the first year level or departmental permission.  
Lectures: Three hours per week.

## 10.26 Science

**3000 Concepts, Methods and Issues in Science I** is the origin of the universe; formation of matter and its nature; origin of the solar system; evolution of the earth and its biosphere; theories of origins of life; mechanisms of evolution and speciation.

Prerequisites: at least 45 credit hours.

Note: *This course may not be used towards fulfillment of the 78 Science credit hours required for the Bachelor of Science Degree.*

**3001 Concepts, Methods and Issues in Science II** is genetic and molecular engineering; behavioral biology; genetic determinism versus environmentalism; artificial intelligence. The paradoxes of the quantum world; the scientific method; science and pseudoscience.

Prerequisite: completion of at least 45 credit hours.

Note: *This course may not be used towards fulfillment of the 78 Science credit hours required for the Bachelor of Science Degree.*

**4000 Senior Science Seminar** are current topics in science reviewed and discussed in a seminar format. Seminars will be presented by faculty, students and guest speakers.

Prerequisites/Co-requisites: Permission of the Program Chair. This course is restricted to students in the General Science program who have completed 80 credit hours or more.

Note: *This will be a designated Writing Course.*

**4950 Senior Project** requires students to work either individually or in pairs on developing a poster presentation on specific scientific topics of current interest. This will require a detailed proposal, followed by the necessary relevant research in appropriate journals and Internet sources. Participants in this course will organize a mini-conference, to be held at the end of semester, at which these posters will be presented. Where appropriate, students will be encouraged to integrate knowledge from at least two different scientific disciplines in the development of this project.

Prerequisites/Co-requisites: Permission of the Program Chair. This course is restricted to students in the General Science program who have completed 80 credit hours or more.

Note: *This will be a designated Writing Course.*

**4951 Honours Project I** is under the guidance of a faculty supervisor, the student will prepare a Project proposal, and carry out a comprehensive bibliographical review, with the aim of producing a well-annotated Bibliography.

Prerequisites/Co-requisites: Permission of the Program Chair. This course is restricted to students in the General Science program who have completed 80 credit hours or more.

Note: *This will be a designated Writing Course.*

**4959 Honours Project II** is a continuation of Science 4951. Under the supervision of a Faculty Advisor, students will prepare an Honours Thesis. The preparation of this will entail some original research, and will require the student to integrate knowledge from at least two disciplines.

Prerequisites/Co-requisites: Science 4951 and permission of the Program Chair.

Note: *This will be a designated Writing Course.*

## 10.27 Social/Cultural Studies Courses

**4000 Interdisciplinary Seminar in Social/Cultural Studies** is conducted through faculty presentations, assigned readings and group discussions and students will learn how to engage and evaluate the broad debates within Anthropology, Folklore and Sociology. Rather than focus on narrow substantive material from the disciplines, this seminar will emphasize the larger shifts and challenges which have led to new topics and methods of analysis within the social sciences.

Prerequisites: This course is restricted to Social/Cultural Studies students who have completed 90 credit hours or more.

**4100 Issues in Cultural Studies** represents an examination of the concept of culture, as it is presently used within Anthropology, Folklore and Sociology. Particular attention will be paid to the area of Cultural Studies, and the ways in which that approach has re-energized an interest in the role of culture in modern society.

Prerequisites: This course is restricted to Social and Cultural Studies students who have completed 90 credit hours or more.

**4950 Independent Project in Social/ Cultural Studies** is under the supervision of a faculty member and students will independently carry out approved projects of direct relevance to social and cultural phenomena, and prepare reports of their findings.

Prerequisite: Social/Cultural Studies 4000.

## 10.28 Sociology

In accordance with Senate's *Policy Regarding Inactive Courses*, the course descriptions for courses which have not been offered in

the previous three academic years and which are not scheduled to be offered in the current academic year have been removed from the following listing. For information about any of these inactive courses, please contact the Head of the Division.

Sociology 1000 or 2000 are prerequisites for all further Sociology courses except 2250 and those cross-listed with Anthropology. Credit is not given for both Sociology 1000 and 2000. Before taking 3000-level courses, students should have taken at least 9 credit hours in courses below the 3000 level. Courses at the 4000 level will normally be taken by students who have previously taken at least 9 credit hours in courses at the 3000 level.

The following courses, cross-listed with Anthropology and identified by the prefix "S/A", are also taught at the introductory level: 2200, 2210, 2220, 2230, 2240, 2260, 2270, 2280, and 2350. A minimum of two of these courses is prerequisite to further cross-listed courses. These courses are open to be taken as first courses or may be taken to follow up a Sociology introductory course.

**2000 Introduction to Sociology** (prerequisite to most departmental courses) is an introduction to the concepts, principles, and topics of Sociology. Credit is not given for both Sociology 1000 and 2000. (Restricted primarily to first-year students.)

**2100 Social Inequality** introduces the subject of social inequality and stratification, examines social inequality in historical perspective, reviews major theories about social inequality, and considers key social developments in contemporary societies in the area of social inequality.

**2120 Technology and Society** is an examination of the role of technology in society. Topics may include the emergence of modern technological society, the impact of new technologies on social organization and culture and the institutionalization of science and the production of scientific knowledge. The course also explores the ideological functions of science and technology in advanced industrial societies as well as the question of "the domination of nature".

**2200 Communities (S/A)** is an interdisciplinary examination of the concept of Community. Readings will include community studies from North America and Europe.

**2210 Communication and Culture (S/A)** is an examination of verbal and non-verbal systems of communication, and the influence of language on human cognition.

**2230 Newfoundland Society and Culture (S/A)** (Same as Folklore 2230) is the Sociology and Anthropology of the Island of Newfoundland. The focus is on social and cultural aspects of contemporary island Newfoundland.

**2240 Canadian Society and Culture (S/A)** is a descriptive and analytic approach to the development of Canadian society and culture.

**2250 Changing World** is sociological analysis of contemporary world issues and social problems.

**2260 War and Aggression (S/A)** is critical review of ethological, psychological and sociological approaches to the understanding of violence and organized aggression.

**2270 Families (S/A)** is a comparative and historical perspective on the family as a social institution, the range of variation in its structure and the determinants of its development.

**2350 Religious Institutions (S/A)** (same as Religious Studies 2350) is comparative study of religious institutions and beliefs, calendrical feasts and solemnities, religious roles and hierarchies, ritual innovation and revitalization.

**2610 Socialization** is an examination of the social and social psychological processes by which individuals become members of human groups (formerly Sociology 4610).

**3040 Introduction to the Methods of Social Research** has as its objectives (1) to introduce basic concepts underlying research in the social sciences, and (2) to make students familiar with some techniques that are useful in the analysis of a wide range of sociological data and that represent a good foundation for later study of more advanced techniques.

**3140 Social Movements (S/A)** is an examination of social movements which challenge prevailing social institutions and cultural values. Social movements considered may include religious cults and sects, millenarian movements, attempts at utopian and communal living, feminism, labour and revolutionary movements.

**3150 Classical Social Theory** is an introduction to the work of major 19th- and early 20th-century social theorists including Marx, Durkheim, Weber and Freud.

**3210 Persistence and Change in Rural Society (S/A)** assesses the social and cultural significance of the rural experience in the face of expanding urbanism. Topics may include (a) the nature of rural society in Canada, (b) similarities between Canadian and European rural society, (c) utopian and anarchist movements in rural life, and (d) reaction of agricultural populations to external influence.

**3290 Deviance** is major sociological theories and methodological techniques central to the study of deviance and crime are outlined and evaluated. The distribution, attributes and explanations of a variety of forms of deviance are examined, which may include violence, sexual deviance, delinquency, addiction, mental disorder, theft, organized crime, political deviance and corporate deviance.

**3314 Gender and Society (S/A 3314)** is an examination of biological, psychological, social and cultural aspects of gender, with an emphasis upon contemporary directions of change in sex roles.

**3395 Criminal Justice and Corrections** provides an introduction to the operation of the Canadian criminal justice system. Topics to be examined may include the origin, nature and utilization of criminal law, policing, adult and juvenile courts, sentencing, correctional institutions, and community based corrections (probation, parole, community service). Criminal justice policy formulation and application are also discussed.  
Prerequisite: Sociology 3290.

**3731 Sociology of Culture** is a comparative examination of major contemporary sociological texts on the relationship between culture, broadly understood as symbolic systems, and social structure.

**4072 Social and Cultural Aspects of Death (S/A)** will cover topics which may include: symbolic meanings and values attached to death; cultural and historical variations in the management of death, e.g. treatment of the 'terminally ill', burial rites, the mourning process, and the social fate of survivors, together with the social and psychological meanings of these behaviours. Open to those without normal prerequisites by permission of the Instructor.

## 10.29 Theatre

**1000 and 1001 Introduction to the History of Theatre I and II** is a historical survey of the art of the theatre. The history of theatre will be studied in terms of the evolution of performance and of the physical theatre from their origins in a variety of social rituals and contexts through to their present plurality of forms. At the same time, the nature and function of the various components of theatrical performance (acting, directing, design, etc.) will be analyzed in terms of period philosophical, social, cultural, political and religious contexts. These courses are open to non-theatre students.  
Lectures: Three hours per week.

**1010 Introduction to Acting** is an appreciation of the fundamentals of the craft of acting. Basic exercises in voice, movement, relaxation and concentration, improvisation and script analysis will introduce the student to the imaginative and physical skills required by an actor. This is a basic course for all theatre students regardless of their specific areas of interest. This course is open to non-theatre students.  
Studio: Six hours per week.

**1020 Introduction to Stagecraft** is an appreciation of the basic vocabulary and techniques of the various technical and organizational structures and practices of staging plays. Areas of concentration will include scenic and costume construction, basics in lighting, painting, props, sound and stage management. This is a basic course for all theatre students regardless of their specific areas of interest. This course is open to non-theatre students.  
Studio: Six hours per week.

**1110 Acting I** is an introductory course for those majoring in acting. Emphasis on voice, speech, movement and text analysis. Various learning methods will be employed, from sensitivity exercises to improvisation and creative imagination exercises. Participation in in-class performance is required. This course is restricted to Theatre Majors.  
Studio: Six hours per week.  
Prerequisites: Theatre 1000, Theatre 1010 and 1020.

**1120 Stagecraft I** is an introductory course for those majoring in stagecraft. Emphasis on the fundamentals of scenic carpentry, wardrobe, sound, lighting, crewing, painting and stage management. Practical projects will be related to departmental productions. This course is restricted to Theatre Majors.  
Studio: Six hours per week.  
Prerequisites: Theatre 1000, Theatre 1010 and 1020.

**2010 and 2011 Acting II (same as former 201A/B)** is a second level course for Acting Majors. Emphasis on speech, text analysis and scene study. Various techniques and texts will be employed to root the student in the fundamental process of acting. A beginning approach to understanding the body as an instrument and the techniques required to use the instrument. These courses are restricted to Acting Majors.  
Studio: Six hours per week.  
Prerequisites: Theatre 1001, Theatre 1110. Theatre 2010 is a prerequisite for Theatre 2011.

**2020 and 2021 Stagecraft II (same as former 202A/B)** are second level courses for the Stagecraft Major. Emphasis on the fundamentals of drafting, stage management, model-making, props building, and painting. These courses are restricted to Stagecraft Majors.  
Studio: Six hours per week.  
Prerequisites: Theatre 1001, Theatre 1120. Theatre 2020 is a prerequisite to Theatre 2021.

**2080 and 2081 Production Acting (4 cr. hrs. each)** is in each case either a semester's worth of work in one of the major productions, in a supporting

capacity (i.e. a supporting role) or a significant role in a studio production. These courses are restricted to Theatre Majors.

Studio: Twelve hours per week.  
Prerequisite: Theatre 1110.

**2090 and 2091 Production Stagecraft (4 cr. hrs. each)** is in each case either a semester's worth of work in a major production in a supporting capacity (i.e. assistant stage manager, wardrobe assistant, etc.) Or in a studio production in a major capacity. These courses are restricted to Theatre Majors.  
Studio: Twelve hours per week.  
Prerequisite: Theatre 1120.

**3010 and 3011 Acting III (same as former 301A/B)** is an intermediate level courses for the Acting Major. Continued emphasis on speech, voice production, text analysis, etc. Intermediate level scene study on material including non-realistic plays. These courses are restricted to Acting Majors.  
Studio: Six hours per week.  
Prerequisites: Theatre 2010 and 2011, Theatre 2080 and 2081.

**3020 and 3021 Stagecraft III (same as former 302A/B)** is an intermediate course for Stagecraft Majors. Continued emphasis on carpentry, painting, lighting, sound, wardrobe, stage management, etc. These courses are restricted to Stagecraft Majors.  
Studio: Six hours per week.  
Prerequisites: Theatre 2020 and 2021, Theatre 2090 and 2091.

**3060 and 3061 Master Classes I and II (Stagecraft)** is in each case a semester's worth of work for stagecraft students with a guest artist in a particular area of specialization. These courses are restricted to Theatre Majors.  
Studio: Six hours per week.  
Prerequisites: Theatre 2020 and 2021. Theatre 3060 is a prerequisite for Theatre 3061.

**3070 and 3071 Master Classes I and II (Acting)** is in each case a semester's worth of work for acting students with a guest artist in a particular area of specialization. These courses are restricted to Theatre Majors.  
Studio: Six hours per week.  
Prerequisites: Theatre 2010 and 2011. Theatre 3070 is a prerequisite for Theatre 3071.

**3080 and 3081 Production-Acting (4 cr. hrs. each)** is in each case work on a major production in a significant capacity (i.e. a principal role) These courses are restricted to Theatre Majors.  
Studio: Sixteen hours per week.  
Prerequisites: Theatre 2010 and 2011, Theatre 2080 and 2081.

**3090 and 3091 Production-Stagecraft (4 cr. hrs. each)** is in each case work on a major production in a significant capacity (i.e. stage manager, crew chief, head of props, etc.). These courses are restricted to Theatre Majors.  
Studio: Sixteen hours per week.  
Prerequisites: Theatre 2020 and 2021, Theatre 2090 and 2091.

**3605 Music Theatre Workshop (6 cr. hrs.)** (same as Music 3605) is an advanced performance course for singers and actors. It offers students the opportunity to experience the performance elements inherent in a professional level music theatre production through an intensive rehearsal period, a performance run and an extended tour. The goal of this course is to develop the students' skills in preparing a production for public performance at a professional level. (Offered in intensive intersession format only).  
Prerequisite: By audition.

**4001 Theatre Institute at Harlow (10 credit hours)** is a full semester's work, utilizing both the Harlow Campus and Sir Wilfred Grenfell College, comprising a "thesis production" involving fourth-year acting and stagecraft students in major responsibilities. A practical component in Theatre Criticism utilizing the resources of the Harlow Campus proximity to London and Stratford. A series of Master Classes, Workshops, Field Trips and Guest Lectures offered by members of the theatre profession in England. A project in a selected area of theatre history.  
Prerequisites: Theatre 4010 or 4011, 4060 or 4070, 4080 or 4090, 4030, 4040.

**4010 Acting IV (same as former 401A)** is an advanced course for acting majors. Concentration on advanced scene study on texts illustrating period styles or genres of plays. This course will be directly related to performance work in Theatre 4080. Restricted to acting majors.  
Studio: Six hours per week.  
Prerequisites: Theatre 3010 and 3011, Theatre 3080 and 3081.

**4020 Stagecraft IV (same as former 402A)** is advanced courses for Stagecraft Majors with individual concentration on specific technical skills. Restricted to Stagecraft Majors.  
Studio: Six hours per week.  
Prerequisites: Theatre 3020 and 3021, Theatre 3090 and 3091.

**4030 Theory of Directing and Design** is an examination and analysis of the nature and practice of directing and design from a theoretical and aesthetical perspective. A lecture/seminar course involving script analysis to examine the interpretive and imagistic processes of directors and designers. Lecture/Seminar: Three hours per week.  
Prerequisites: Theatre 3010 and 3011 or Theatre 3020 and 3021, Visual Arts 2700 and 2701, and 18 credit hours in Dramatic Literature courses.

**4040 Directed Studies** are student projects in playmaking, performance, directing, design or technical presentations supervised by faculty. In consultation with the faculty, the student will submit a proposal for a project on which he/she wishes to work. These projects will be presented in public. Restricted to Theatre Majors.  
Studio: Six hours per week.  
Prerequisites: Theatre 3010 and 3011 or Theatre 3020 and 3021.

**4060 Master Class III (Stagecraft)** is advanced work with a guest artist in a particular area of specialization. Restricted to Theatre Majors.  
Studio: Six hours per week.  
Prerequisites: Theatre 3060 and 3061.

**4070 Master Class III (Acting)** is advanced work with a guest artist in a particular area of specialization. Restricted to Theatre Majors.  
Studio: Six hours per week.  
Prerequisites: Theatre 3070 and 3071.

**4080 Production-Acting (4 cr. hrs.)** is work on a major production in a significant and leading capacity (i.e. leading or principal role). Restricted to Theatre majors.  
Studio: Twenty hours per week.  
Prerequisites: Theatre 3010 and 3011, Theatre 3080 and 3081.

**4090 Production-Stagecraft (4 cr. hrs.)** is work on a major production in a significant and leading capacity (i.e. designer, stage manager, technical director, etc.). Restricted to Theatre Majors.  
Studio: Twenty hours per week.  
Prerequisites: Theatre 3020 and 3021, Theatre 3090 and 3091.

## 10.30 Tourism

### 10.30.1 Core Program Course Descriptions

**1000 Principles of Tourism** introduces students to the history of tourism and leisure, and the development of the field of tourism studies. This will include consideration of foundational concepts such as culture and nature, research on the needs and gratifications of tourists, and studies of the functions of tourism.  
Note: *Credit may not be obtained for both Tourism 1000 and HKR 3565.*

**1100 Perspectives in Tourism** is an examination of tourism and the ideals, beliefs, institutions, and experiences that contribute to culture. The course will emphasize the application of the humanities and social sciences to such areas as heritage, tradition and history. The student will gain an understanding of, and appreciation for, the importance of literary, aesthetic, philosophical and religious traditions.

**2000 Tourism and Sustainability** investigates the concept of sustainability and focuses on the importance of sustainable tourism initiatives, covers measuring the demand for tourism, the role of government and industry stakeholders in the tourism planning process, and a consideration of how tourism planning strategies are developed, implemented, evaluated, and controlled. In addition, there will be an examination of the principles that structure the tourism industry.  
Prerequisite: Tourism 1000 and 1100.

**2201 Tourism Marketing** explores marketing processes, concepts and methods, with special interest in the initiation, development and management of new tourist enterprises. Other topics include: societal marketing philosophy, the marketing mix as it relates to tourism, market research, consumer behaviour, branding and services marketing, and the implications of transportation systems on tourism activities, services marketing, sustainable tourism marketing, and e-marketing.  
Prerequisite: Tourism 1000 and Tourism 1100.

Note: *Credit may not be obtained for Tourism 2201 and Business 1201 or HKR 3565.*

**3010 Issues in Ecotourism** will, through the use of cases, examine philosophical, historical and contemporary issues and challenges in resource recreation and ecotourism. Opportunities for tourism activity based on special or unique ecological considerations and other forms of alternative tourism are examined, as are issues around the sustainability, impacts, risk management, programming, tour operation, ethics, development, marketing and parks management.  
Prerequisites: Tourism 3100. Students must have officially declared a Major in Tourism Studies, a Minor in Tourism Studies, or have been accepted into the Advanced Diploma program in Tourism Studies.

**3100 Resource Valuation and Tourism Activity Impact Assessments** considers contemporary issues in the allocation of scarce natural and cultural resources demanded by tourism activity, and the determinants of the demand and supply for tourism recreation. Students will examine the impacts of those tourism and leisure activities upon natural systems (e.g., cultural, ecological, socio-cultural, etc.) and economies, (local, regional, etc.). Visitor impacts will also be considered.  
Prerequisites: Statistics course, Economics 2010 and 2020. Students must have officially declared a Major in Tourism Studies, a Minor in Tourism Studies, or have been accepted into the Advanced Diploma program in Tourism Studies.

**3800 Colloquium in Tourism Management (Applied Interpretation)** will have during this course, three tourism practitioners from the region and beyond will hold seminars. The meetings are organized as "master classes,"

with direct interaction between the students and the outside experts. Depending on the practitioners, the specific focus of the tourism management may include reference to Ecology, Botany, Marine Aquatic contexts, Bird Watching, Field Guiding, Wildlife, Geography, Geology, Protected Sites, Museums and Cultural Interpretation, and Arts Programming.

Prerequisites: Tourism 3100. Students must have officially declared a Major in Tourism Studies, a Minor in Tourism Studies, or have been accepted into the Advanced Diploma program in Tourism Studies.

**3900 Global Issues and Tourism** highlights the importance of responding to world issues in tourism, and considers issues around socio-political-environmental factors influencing tourism, the impact of new social movements on tourism, the demographics and psychographics of travelers, the promotion of culture and territories, and the globalization of tourism.  
Prerequisite: Students must have officially declared a Major in Tourism Studies, a Minor in Tourism Studies, or have been accepted into the Advanced Diploma program in Tourism Studies.

**4010 Community and Cultural Issues in Tourism** is a case-based course examines cultural diversity and developing sensitivities around an appreciation of one's own and other culturally-bound leisure and tourism activities. Students will build skills in areas such as inclusive planning, communication and negotiation, the changing nature of international tourism, identifying synergies and potential links with global partners (e.g., NL and Ireland).  
Prerequisite: Students must have completed 78 credit hours, and have officially declared a Major in Tourism Studies, a Minor in Tourism Studies, or have been accepted into the Advanced Diploma program in Tourism Studies.

**4900-4910 Special Topics in Tourism** is a case-based course focusing on the application of major tourism theories and concepts to modern tourism industry issues. Potential areas of consideration include transportation issues in tourism, visitor management, rural tourism, urban tourism, health tourism and therapeutic recreation, island tourism, critical regionalism, maximizing the year-round potential of tourism, and contemporary research in tourism.  
Prerequisites: Tourism 1000 and Tourism 1100. Students must have completed 78 credit hours, and have officially declared a Major in Tourism Studies, a Minor in Tourism Studies, or have been accepted into the Advanced Diploma program in Tourism Studies.

**4950 Senior Project in Tourism** will have students, under the guidance of a faculty member, complete an independent research project and produce a report. Topics must have the approval of the Program Chair of Tourism Studies.

Prerequisite: Students must have completed 78 credit hours, and have officially declared a Major in Tourism Studies, a Minor in Tourism Studies, or have been accepted into the Advanced Diploma program in Tourism Studies.

### 10.30.2 Electives Course Descriptions

**2300 Hospitality Management** introduces students to the organization and structure of resorts, hotels, restaurants, and cruise ships. Areas of consideration include business ethics, service contracts, areas of management responsibility such as strategic planning, the evaluation of financial, environmental and human resources considerations.  
Prerequisites: Tourism 1000 and Tourism 1100.

**2301 Events Management** provides an introduction to the principles and practices of event/festival management. The material will include the development of event attractions and facilities, and consideration of specific implications of planning in the areas of finance, human resources, environment, marketing, and quality management. In addition, special consideration is given to the infrastructure requirements, volunteers, sponsorship, fund raising, event planning, marketing and economic and tourism impacts of festivals and other events.  
Prerequisites: Tourism 1000 and Tourism 1100.

**2305 Arts Administration and Exhibition Management** aims to present and apply various approaches in tourism and cultural theory in the context of contemporary cultural performance and exhibition. Students will learn principles of arts administration, as well as current debates in museology and cultural representation.  
Prerequisites: Tourism 1000 and Tourism 1100.

**3210 Interpretation of Natural Resources** covers the principles and practice of interpretation as a component of ecological resource recreation. This course would introduce the student to the practice of interpretation. Concentration would be on interpretation of natural resources (e.g., rocks, fossils, plants, animals, weather, geomorphology, etc.).  
Prerequisites: Tourism 1000 and Tourism 1100. Students must have officially declared a Major in Tourism Studies, a Minor in Tourism Studies, or have been accepted into the Advanced Diploma program in Tourism Studies.

**3211 Interpretation of Cultural Resources** covers the principles and practice of interpretation of cultural heritage resource recreation. The techniques include written and oral interpretation materials, as well as the "living interpretations" used in historical and cultural settings. Concentration would be on interpretation of cultural resources (e.g., artifacts of previous indigenous cultures, etc.).  
Prerequisites: Tourism 1000 and Tourism 1100. Students must have

officially declared a Major in Tourism Studies, a Minor in Tourism Studies, or have been accepted into the Advanced Diploma program in Tourism Studies.

**3220 Conservation Planning** examines attitudes, values and approaches around conservation, preservation, utility, stewardship and management of natural and cultural artifacts. Ecological and Cultural Heritage conservation programs, strategies, policies and legislation are also surveyed. Prerequisites: Tourism 1000 and Tourism 1100. Students must have officially declared a Major in Tourism Studies, a Minor in Tourism Studies, or have been accepted into the Advanced Diploma program in Tourism Studies.

Note: *Credit may not be obtained for both Tourism 3220 and HKR 3555.*

**3230 Parks and Protected Areas** examines the history and geography of national parks and other publicly protected lands, and considers the impact of human interaction with landscapes. Additionally, the course will focus on tourism planning and management in national parks and protected areas, and investigate guidelines for best practice in tourism operations. Prerequisites: Tourism 1000 and Tourism 1100. Students must have officially declared a Major in Tourism Studies, a Minor in Tourism Studies, or have been accepted into the Advanced Diploma program in Tourism Studies.

Note: *Credit may not be obtained for both Tourism 3230 and HKR 3555.*

**3240 Cultural Heritage Development** considers built, natural and cultural resources for heritage tourism destinations on a variety of scales from World Heritage Sites to countryside and rural tourism attractions. Issues around the international context of heritage, interpretation, and packaging of cultural heritage products, regional identities and environments and the importance of small and medium sized enterprises are examined. Prerequisites: Tourism 1000 and Tourism 1100. Students must have officially declared a Major in Tourism Studies, a Minor in Tourism Studies, or have been accepted into the Advanced Diploma program in Tourism Studies.

**4020 Seminar in Rural and Remote Tourism** provides an overview of tourism as it intersects with rural development theory, processes and planning. In addition, the course examines various social, environmental, cultural and economic problems, consequences and opportunities within a rural/peripheral area context (e.g., visitor attraction and accommodation, special transport issues). Prerequisite: Students must complete 78 credit hours, and have officially declared a Major in Tourism Studies, a Minor in Tourism Studies, or have been accepted into the Advanced Diploma program in Tourism Studies.

## 10.31 University

**1010 The University Experience** introduces students to the different modes of enquiry that one finds in the University, the interrelatedness of knowledge and the role of the University in society. It also provides students with tools and techniques of study and research that can lead them to academic success and fulfilling career.

## 10.32 Visual Arts

### 10.32.1 1st Year

**100A/B Drawing I** is the fundamentals of drawing with study of line, tone, shape, volume, form, texture, space. Emphasis on drawing the human figure and studio problems. Attendance required. Studio: Six hours per week. Co-requisites: Visual Arts 110A/B, 120A/B.

**110A/B Two Dimensional Design and Media** is principles of color theory and color mixing. Painting techniques in various media. Emphasis on rendering of form in space and organization of two dimensional surface through studio problems. Attendance Required. Studio: Six hours per week. Co-requisites: Visual Arts 100A/B, 120A/B.

**1000 Introduction to Two-Dimensional Media** is an introduction to two-dimensional media (design, drawing and painting) that will provide students with both studio experience and an increased sensitivity to aesthetic concerns. Students will investigate design principles through an exploration of visual fundamentals. The course will also cover basic drawing, including drawing from life and will introduce the study of colour through the use of a variety of media. These concepts will be explored through lecture and/or studio experiences. Attendance is required. Studio and lecture: Three hours per week. Note: *Students are NOT expected to have previous drawing or art experience.*

**1001 Introduction to Process Based Media** is an introduction to process-based media that will provide students with both studio experience and an increased sensitivity to aesthetic concerns. Students will be shown the fundamental concepts of a variety of process-based media with selections being made from the media of printmaking, sculpture and photo media (photography, digital imaging, performance, video). These concepts will be explored through lecture and/or studio experiences. Attendance required. Studio and lecture: Three hours per week. Note: *Students are NOT expected to have previous art experience.*

**120A/B Three Dimensional Design and Media** is three dimensional form and spatial organization. Exploration of sculptural media through studio problems. Attendance required. Studio: Six hours per week. Co-requisites: Visual Arts 100A/B, 110A/B.

### 10.32.2 2nd Year

**2000 Second Year Drawing I** is development of drawing skills with emphasis on the human figure and studio problems. Attendance required. Studio: Six hours per week. Prerequisite: Visual Arts 100 A/B, 110 A/B, and 120 A/B.

**2001 Second Year Drawing II** is a continuation of the work begun in Visual Arts 2000. Attendance required. Studio: Six hours per week. Prerequisite: Visual Arts 2000.

**2100 Introductory Painting I** is painting media applied to problems of spatial structure, light, color, volume and surface relationships. Studio: Six hours per week. Attendance required. Prerequisite: Visual Arts 100 A/B, 110 A/B, and 120 A/B.

**2101 Introductory Painting II** is a continuation of the work begun in Visual Arts 2100. Attendance required. Studio: Six hours per week. Prerequisite: Visual Arts 2100.

**2200 Introductory Sculpture I** is development of accurate and expressive control of three-dimensional media. Attendance required. Studio: Six hours per week. Prerequisite: Visual Arts 100 A/B, 110 A/B, and 120 A/B.

**2201 Introductory Sculpture II** is a continuation of the work begun in Visual Arts 2200. Attendance required. Studio: Six hours per week. Prerequisite: Visual Arts 2200.

**2300 Introductory Printmaking I** - inactive course.

**2301 Introductory Printmaking II** - inactive course.

**2310 Introductory Printmaking: Relief** is an intensive exploration of Relief Printmaking concepts and techniques using wood and lino. Attendance required. Studio: Six hours per week. Prerequisite: Visual Arts 100 A/B, 110 A/B, and 120 A/B.

**2311 Introductory Printmaking: Intaglio** is an intensive exploration of Intaglio Printmaking concepts and techniques. Also includes monoprint and collograph experience. Attendance required. Studio: Six hours per week. Prerequisite: Visual Arts 100 A/B, 110 A/B, and 120 A/B.

**2320 Introductory Printmaking: Serigraphy** is an intensive exploration of Serigraphic Printmaking concepts and techniques. Attendance required. Studio: Six hours per week. Prerequisite: Visual Arts 100 A/B, 110 A/B, and 120 A/B.

**2321 Introductory Printmaking: Lithography** is an intensive exploration of Lithographic Printmaking concepts and techniques. Attendance required. Studio: Six hours per week. Prerequisite: Visual Arts 100 A/B, 110 A/B, and 120 A/B.

**2400 Introductory Photography I** is basic techniques of black and white photography including negative exposure, film development and print production. Attendance required. Studio: Six hours per week. Prerequisite: Visual Arts 100 A/B, 110 A/B, and 120 A/B.

**2401 Introductory Photography II** is a continuation of the work begun in Visual Arts 2400. Attendance required. Studio: Six hours per week. Prerequisite: Visual Arts 2400.

**2600 Introductory Digital Imaging I** is an introduction to the computer as an art-making tool. Computer basics. Creation acquisition, manipulation and output of digital images using several applications. Attendance required. Prerequisite: Visual Arts 100A/B, 110A/B, and 120A/B.

**2601 Introductory Digital Imaging II** is a continuation of the work begun in Visual Arts 2600. Students will learn to create original artworks directly on the computer and how to incorporate images from other sources using a color scanner. The ethics, aesthetics and theory of digital image-making for artists will also be addressed. Attendance required. Prerequisite: Visual Arts 2600.

### 10.32.3 3rd Year

**3000 Intermediate Drawing I** is further development of drawing skills. Attendance required. Studio: Six hours per week. Prerequisite: Visual Arts 2001.

**3001 Intermediate Drawing II** is a continuation of the work begun in Visual Arts 3000. Attendance required.



Studio: Six hours per week.  
Prerequisite: Visual Arts 3000.

**3100 Intermediate Painting I** is continued development of painting stressing personal expression and critical awareness. Attendance required.  
Studio: Six hours per week.  
Prerequisite: Visual Arts 2101.

**3101 Intermediate Painting II** is a continuation of Visual Arts 3100. Attendance required.  
Studio: Six hours per week.  
Prerequisite: Visual Arts 3100.

**3200 Intermediate Sculpture I** is continued development of skills in sculpture media. Attendance required.  
Studio: Six hours per week.  
Prerequisite: Visual Arts 2201.

**3201 Intermediate Sculpture II** is a continuation of Visual Arts 3200. Attendance required.  
Studio: Six hours per week.  
Prerequisite: Visual Arts 3200.

**3310 Intermediate Relief and/or Intaglio I** is projects in Printmaking. Relief and/or Intaglio. In consultation with the instructor students will select the medium or combination of media in which to work. Attendance required.  
Studio: Six hours per week.  
Prerequisite: Visual Arts 2311.

**3311 Intermediate Relief and/or Intaglio II** is projects in Printmaking. Relief and/or Intaglio. In consultation with the instructor students will select the medium or combination of media in which to work. Attendance required.  
Studio: Six hours per week.  
Prerequisite: Visual Arts 3310.

**3320 Intermediate Serigraphy and/or Lithography I** is projects in Printmaking. Serigraphy and/or Lithography. In consultation with the instructor students will select the medium or combination of media in which to work. Attendance required.  
Studio: Six hours per week.  
Prerequisite: Visual Arts 2321.

**3321 Intermediate Serigraphy and/or Lithography II** is projects in Printmaking. Serigraphy and/or Lithography. In consultation with the instructor students will select the medium or combination of media in which to work. Attendance required.  
Studio: Six hours per week.  
Prerequisite: Visual Arts 3320.

**3350 Directed Studies in Printmaking** is a professional work/study experience in Printmaking. The student will undertake his or her own projects in Printmaking. In addition, he/she will assist the Director and/or Master printer at St. Michael's Printshop in the day to day operations of the studio. The student will be required to write a paper on an aspect of Printmaking as it pertains to St. Michael's Printshop. Normally this course is available during Spring Session only (May to mid-August) so that students can experience the complete summer activities scheduled at St. Michael's.  
Prerequisite: Six credit hours from any of the following Visual Arts courses: 2310, 2311, 2320, or 2321, and permission of the Program Chair.

**3400 Intermediate Photography I** is critical evaluation of photographs. Continued development of photographic skills, use of color and larger camera formats. Attendance required.  
Studio: Six hours per week.  
Prerequisite: Visual Arts 2401.

**3401 Intermediate Photography II** is a continuation of Visual Arts 3400. Attendance required.  
Studio: Six hours per week.  
Prerequisite: Visual Arts 3400.

**3500 Multi-media I** is projects in combined media. Attendance required.  
Studio: Six hours per week.  
Prerequisite: Permission of the Department.

**3501 Multi-media II** is a continuation of Visual Arts 3500. Attendance required.  
Studio: Six hours per week.  
Prerequisite: Visual Arts 3500.

**3510 Digital Multi-Media I** is an exploration of computer based multi-media production on the computer involving 2-D and 3-D graphics, animation, video, sound and text. Attendance required.  
Prerequisite: Visual Arts 2601.

**3511 Digital Multi-Media II** is a continuation of the work begun in Visual Arts 3510. Students will learn how to create original artworks directly on the computer and how to incorporate still images, moving images, sound and text using a color scanner, video camera, video cassette recorder, midi devices, etc. The ethics, aesthetics and theory of digital multi-media production for artists will also be addressed. Attendance required.  
Prerequisite: Visual Arts 3510.

## 10.32.4 4th Year

**4950 Independent Projects in Studio I** will have students, under the

supervision of a faculty member, produce an independent body of exploratory work and a related written artist statement and description of the progress and development of their work. Students are required to present the written component and body of work at a term end critique with all members of faculty. Attendance required.  
Prerequisites: 54 credit hours of studio courses.

**4951 Independent Project in Studio II** will have students, under the supervision of a faculty member, produce an independent body of consistent work and a related written artist statement and final description of the work. Students are required to present the written component and body of work at a term end critique with all members of the faculty. Attendance required.  
Prerequisite: Visual Arts 4950.

## 10.32.5 Art History Courses

Notes: 1. *The prerequisite for all 3000-level courses is Visual Arts 2701 or History 1101 or permission of the Chair, Visual Arts.*  
2. *No students shall register in any course having an initial digit "4" unless they have successfully completed at least 6 credit hours in Art History courses or by permission of the Chair, Visual Arts.*

**2700 Art History Survey I** (same as History 2700) is the history of art from pre-historic times to the Renaissance.  
Lectures: Three hours per week.

**2701 Art History Survey II** (same as History 2701) is the history of art from the Renaissance to the twentieth century.  
Lectures: Three hours per week.

**3700 Art History: The Italian Renaissance** (same as History 3700) is an overview of the art and architecture of Renaissance Italy with an emphasis upon the historical context in which art was produced.

**3701 Art History: The Renaissance Outside Italy** (same as History 3701) is the Renaissance outside Italy from the late fourteenth century and the International style through the 16th century. As with the Italian Renaissance the art and architecture will be discussed in its historical context.

**3702-3721 Art History: Special Topics** has a range of special topics which might include: Early Renaissance Art, Art of the Later Renaissance, Canadian Art to 1900, 20th C. Canadian Art, American Art to 1900, History Context and Modern Users.

**3620 Philosophy of Art** (same as Philosophy 3620) is an introduction to aesthetics; applications in Visual Arts, music and drama.

**3820 Religion and the Arts** (same as Religious Studies 3820) is an examination of the role of art in the expression of religious ideas, together with a study of specific religious themes and concerns in one or more of the following: literature, film, music, painting, sculpture, and dance.  
Prerequisite: Religious Studies 2810 or permission of the Department of Religious Studies.

**4700-4729 Art History: Special Topics** has a range of senior topics which might include: British Art and Architecture, Modern Art, Modern Art II, Aesthetics, 17th and 18th Century Art, 19th Century Art, Research Project in Modernism.

**4730 Art History: Modern Art I: Precursors to Modernism** (same as History 4730) is an examination of the cultural, social, and political forces which, from 1750 to 1850, were to have a major impact on modernity and later modern art.  
Prerequisites/Co-requisites: Six credit hours in art history or permission of the chair of the Visual Arts Program.

**4731 Art History: Modern Art II: Early Modernism** (same as History 4731) is an examination of the various cultural and social forces between 1850 and 1914 which shaped the rise of the Modern movement.  
Prerequisites/Co-requisites: Six credit hours in art history or permission of the chair of the Visual Arts Program.

**4740 Current Issues in Art** is studies in Contemporary Art.  
Lectures: Three hours per week.

**4741 Art Criticism** is theories of Art Criticism.  
Lectures: Three hours per week.

## 10.33 Women's Studies

**2000 An Interdisciplinary Introduction to Women's Studies** is an interdisciplinary introduction to the major concepts, issues and debates of Women's Studies.

**2001 Women and Science** is an investigation of: historical and contemporary contributions of women scientists, especially Canadians; different sciences and how they study women; and feminist and other perspectives on gender and science.  
Three hours of lectures per week.

### 3000-3010 Special Topics in Women's Studies

**4000 Seminar in Women's Studies** is an interdisciplinary seminar designed to focus on women's issues, and on theories and methodologies of women's studies.  
Three-hour seminar per week.

Prerequisites: Students must normally have completed Women's Studies 2000 and 15 credit hours in other Women's Studies Program courses before taking Women's Studies 4000. In exceptional cases, students without these

prerequisites may be accepted into the course, with the approval of the Instructor of WSTD 4000 and the Program Coordinator.

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*DISTANCE EDUCATION AND LEARNING TECHNOLOGIES*

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# DISTANCE EDUCATION AND LEARNING TECHNOLOGIES

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**Director**

Vaughan, A.M., B.A., B.Ed., *Memorial*, M.A. *British Columbia*

**Associate Director**

Hyde, R., B.A., B.Ed., M.Ed., *Memorial*

**Manager, Finance and Administration**

Blanchard, L., B.Comm. *Memorial*, C.A.

**Manager (Acting), Instructional Development Office**

Dunne, M., B.A., B.Ed., M.Ed. *Memorial*, Ph.D. *OISE/UT*

**Administrative Staff**

Mahon, P., Secretary

Porter, C., Administrative Staff Specialist

Memorial University of Newfoundland's Distance Education and Learning Technologies (DELTA) is responsible for the design, development and delivery of credit courses and degree programs via distance; advancement and support of e-learning throughout the University; and support for students and faculty in the effective use and application of technologies for effective teaching and learning. Through its activities DELTA connects students across the province, the country and the world, who have limited educational opportunities due to time and location, to higher education through its distance education program. It also works to enhance, promote and support an e-learning vision throughout the institution and strives to provide faculties and departments with the e-learning expertise and knowledge needed to progress the University's mandate in expanding and improving its distance education delivery. A Memorandum of Understanding with the Department of Education's, Centre for Distance Learning and Innovation (CDLI), who deliver distance education to K-12 students, allows DELTA to share knowledge and information across all sectors and prepare for the incoming university student.

## 1 Distance Education

Distance Education and Learning Technologies (DELTA) offers approximately 360 courses – half of which are web-based – to approximately 13,000 course registrants annually. Courses are available in 26 disciplines in 10 faculties and schools with complete undergraduate and graduate degrees available via distance including bachelors' degrees in business (Bachelor of Business Administration), maritime studies (Bachelor of Maritime Studies), nursing (Bachelor of Nursing (Post RN)), and technology (Bachelor of Technology); Masters' degrees are offered in education (Master of Education, Information Technology) and nursing (Master of Nursing). Courses are delivered mainly via the World Wide Web, however, some courses include print materials (i.e. manual, readings, textbooks), CD/Video/DVD programs and teleconference sessions.

## 2 Student Service and Delivery

DELTA's Student Service and Delivery model utilizes a 1-1-1 approach; one response to one inquiry by one staff representative. This model incorporates a hands-on one-on-one service counter with a self-service website which provides the self-directed distance student with access to relevant and important information during off-peak hours. This system effectively places specific information, such as course materials, in the hands of students thereby reducing wait times and allowing for effective communications with students on specific matters.

Further information on distance education programs may be obtained by telephone to (709) 737-8700, or toll free to (866) 435-1396, or by fax to (709) 737-4070, or by e-mail to [distance@mun.ca](mailto:distance@mun.ca), or through the website at [www.distance.mun.ca](http://www.distance.mun.ca).

## 3 Course Development (Design, Development and Delivery)

DELTA combines the expertise of specialists including Instructional Designers, Multi-media specialists, Video Producers, Publications Specialists etc. to work closely with academic units and professors to develop, manage and deliver the University's distance education programs in a manner conducive to instruction via distance. All functions encourage and support innovative teaching practices through the application of instructional technologies in both on-campus teaching and distance education.

Within this function, DELTA provides a wide range of professional media development, production, post-production, and distribution services. Video services include broadcast-quality studio and mobile facilities, and production services such as digital cameras, AVID non-linear editing, digitization, international standards conversion, tape and DVD production, distribution and the Internet. Multimedia specialties include print layout and design, illustration, television graphics and animation, 3D visualization, and design for the World Wide Web. Technical staff offer consultation, design, installation, and maintenance services for multimedia teaching facilities.

Classroom Support Services provides multimedia and audiovisual support for teaching on-campus as well as the design of smart classrooms and/or the implementation of technologies in the classroom.

Further information on media production services may be obtained by telephone to (709) 737-7575 or by fax to (709) 737-4635.

## 4 Instructional Development Office

The Instructional Development Office provides support to the University's faculty members and graduate students in the enhancement of their teaching knowledge and skills. The Office espouses a collaborative, responsive, and pragmatic approach to developing services and programs related to teaching and learning.

Among the services provided are professional development workshops and seminars, programs for the teaching development of graduate students, and individual and small group consultations. Support is given for awards applications and other activities and initiatives that recognize the importance of university teaching. *The News*, a faculty newsletter about teaching and learning, is published three times a year and a resource centre offers a collection of books, journals, newsletters, and video programs about instruction.

Further information on instructional development services may be obtained by telephone to (709) 737-3028, or by fax to (709) 737-4635, or by e-mail to [instdev@mun.ca](mailto:instdev@mun.ca).

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DIVISION OF LIFELONG LEARNING

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# DIVISION OF LIFELONG LEARNING

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## DIVISION OF LIFELONG LEARNING

### Director

Whalen, D.M., Dip.A.A. C.T.T., B.VocEd., MBA *Memorial*

### Assistant Director

Healey, E.M., B.Voc.Ed., M.Ed. *Memorial*

### Administrative Staff

Clairmont, G., Administrative Secretary

The Division of Lifelong Learning is dedicated to providing open and accessible learning opportunities in conformity with the University's strategic outreach education and its dedication to providing a superior learning environment through responsive and innovative teaching as outlined in the document "Launch Forth".

## 1 Certificate Programs

The following certificate programs are available through the Division of Lifelong Learning. These programs are offered by and are under the academic control of the appropriate faculties and schools.

### 1.1 Admission Requirements

Students who wish to complete certificate programs must be admitted to the University as undergraduate students and comply with the **General Academic Regulations (Undergraduate)**.

### 1.2 Regulations for a First Certificate

A Memorial University of Newfoundland certificate is awarded to students who complete certificate program requirements.

1. Every candidate for a certificate shall comply with all the course requirements governing the award of that certificate.
2. Candidates shall complete at this University a minimum of 9 credit hours of the total number of credit hours required for a certificate.
3. No candidate will be awarded a certificate unless s/he has obtained an average of 2 points or better on the total number of credit hours required for the certificate.

### 1.3 Regulations for a Second Certificate

Students who have completed a certificate program and wish to complete a second certificate must:

1. comply with all course requirements governing the award of that certificate; and
2. complete at least 9 credit hours beyond those required for the first certificate. The courses which comprise these credit hours must be applicable to the certificate sought.

### 1.4 Certificate in Business Administration

The Certificate in Business Administration is widely recognized by business and industry. It is designed for management-entry level employees who are interested in career development. Courses completed on the certificate program can be applied toward the diploma and the general degree of the Bachelor of Commerce, and the Bachelor of Business Administration.

Students who have a particular interest in Accounting, Marketing, Human Resources and Labour Relations, Small Business/Entrepreneurship or Information Systems should consult with the Division regarding choice of elective courses.

#### 1.4.1 Regulations for the Certificate in Business Administration

To be eligible for the Certificate in Business Administration a student must have:

1. Completed the following 30 credit hours: Business 1000, 1101, 1201, 2301, 4000, Either 3320 or 4320 and 12 credit hours in business electives which may include Computer Science 2801
2. At least two years of full-time work experience or equivalent.
3. At least two years during which the student has not been in full-time attendance at a secondary or post-secondary institution.

### 1.5 Certificate in Career Development

The Certificate in Career Development is designed for persons working in the career development field who wish to consolidate and deepen their knowledge base. The program will provide a grounding in career development theory and practice for those wishing to enter the field. The practicum will give new entrants to the field valuable work experience and will allow existing practitioners the opportunity to reflect on and improve their practice.

#### 1.5.1 Regulations for the Certificate in Career Development

##### 1.5.1.1 Curriculum

Students will be required to complete a total of ten courses as follows:

1. Required Courses: Career Development 1000, 1100, 1200, 1210, 1220, 1300, and 3000
2. Three Elective Courses from the following list: Career Development 2000, 2001, 2100, 2200, or 2300

Notes: 1. Students are required to meet **UNIVERSITY REGULATIONS - Admission/Readmission to the University (Undergraduate)** for entry to Memorial University of Newfoundland.

2. Students may receive up to three exemptions for equivalent course work completed through another program or at another institution. If students have previously obtained credit from Memorial University of Newfoundland for any of the courses on a certificate program, they are not required to repeat these courses. To receive exemptions for certificate credit courses, students must make a written request with supporting documents (transcripts and course descriptions) to the Program Developer, Certificate Programs, Division of Lifelong Learning for consideration by the Advisory Committee for the certificate.

## 1.6 Certificate in Criminology

The Certificate in Criminology is designed for members of the community who have a special interest in the structure and administration of criminal justice. The program is of particular interest to persons engaged in law enforcement, corrections and rehabilitation.

### 1.6.1 Regulations for the Certificate in Criminology

To be eligible for the Certificate in Criminology a student must complete the following:

1. Fifteen credit hours including Psychology 1000; Sociology 3290, 3395; one of Political Science 1000, 1010, 2710; and one of Sociology 1000, 2000.
2. Six credit hours chosen from the following where a maximum of 3 credit hours can be in one subject area:  
Anthropology 2492; Political Science 2000, 2710, 3720, 3741; Psychology 2012, 2100, 2800, 3533, 3640; Social Work 2510, 3510, 3721, 4612, 5112; Sociology 2100, 2230, 2250, 3120.

*Note: In some cases, students may substitute one optional course not listed in section 2, that has relevance to their area of speciality and to the field of criminology. Students may submit their request, in writing, to the Program Developer, Certificate Programs, Division of Lifelong Learning. The Advisory Committee will consider the request. Permission to substitute must be obtained prior to the student enrolling in or completing the course.*

3. Two of Criminology 1302, 1303, 3301.

*Note: Criminology 3301 Selected Topics in Criminology is not offered on a regular basis. Students may enroll in this course several times as content changes, however it may be applied to the certificate only once.*

## 1.7 Certificate in Library Studies

The Certificate in Library Studies is for persons working in a library who wish to be more accomplished providers of library services. The program will benefit personnel in school, public, university, medical, legal, and special interest libraries.

### 1.7.1 Regulations for the Certificate in Library Studies

To be eligible for the certificate in Library Studies a student must complete the following:

1. Business 2000; Library Studies 1601, 1602, 1603, 1606, 1609.
2. Four courses chosen from Library Studies 1604, 1605, 1610, 1611, 2606, 3600, 3601-3609.

*Note: In some cases, students may substitute one elective course that has relevance to their area of speciality and the field of library studies. Students may submit their request in writing to the Program Developer, Division of Lifelong Learning for consideration by the Advisory Committee.*

## 1.8 Certificate in Municipal Administration

The Certificate in Municipal Administration is intended for employees of municipalities, and other interested parties, who wish to develop skills used in the administration of municipal services.

### 1.8.1 Regulations for the Certificate in Municipal Administration

To be eligible for the Certificate in Municipal Administration a student must complete the following:

1. Municipal Administration 1701, 1702, 2703, 2704, 2705, 2706.
2. Two courses chosen from Business 2000, 2301, 3320, 4320; Municipal Administration 2707.

## 1.9 Certificate in Newfoundland Studies

The Certificate in Newfoundland Studies is designed for those who wish to expand their knowledge of Newfoundland and Labrador. The program will be useful to persons involved in community, rural and northern development; cultural affairs, tourism, education and archival and library services.

### 1.9.1 Regulations for the Certificate in Newfoundland Studies

To be eligible for the Certificate in Newfoundland Studies a student must complete 24 credit hours in at least four different subject areas chosen from the following:

Anthropology 3290, 3850; Economics 2070,3070; Education 3571; English 3155; Folklore 2300, 2230; Geography 3290, 3490; History 3110, 3120; Linguistics 2210; Political Science 3780; Religious Studies 3900, 3901; S/A 2220, 2230.

A maximum of 6 credit hours may be chosen from the following:

Anthropology 4280; Business 2000; Economics 3080; Folklore 2401, 3860, 4310, 4400; Geography 4690; History 4230, 4231; Linguistics 4220; Political Science 3790, 4731.

## 1.10 Certificate in Public Administration

The Certificate in Public Administration is intended for public sector employees and any others who wish to further their understanding of the administration of public policy and public programs.

### 1.10.1 Regulations for the Certificate in Public Administration

To be eligible for the Certificate in Public Administration a student must complete the following:

1. Business 2000, 2301; Political Science 2710, 2711, 3540, 3741.
2. Six credit hours chosen from each of two of the following groups A, B, C for a total of 12 credit hours.  
Group A courses: Business 1000, 1101, 2101, 3320, 4320.  
Group B courses: Political Science 1000, 1010, 3720, 3730, 3770, 3790, 4730, 4790  
Group C courses: Any 6 credit hours in arts, science or business electives.

## 1.11 Certificate in Records and Information Management

The Certificate in Records and Information Management provides continuing education to those working in the records, archival and information management fields and certification in a developing profession in which practitioners have limited access to relevant

upgrading.

### 1.11.1 Regulations for the Certificate in Records and Information Management

To be eligible for the Certificate in Records and Information Management a student must complete the following:

1. Business 2000, 3700; Computer Science 2801 or 2650 (or equivalent); Mathematics 1080 (or equivalent); Records Management 1000, 1001, 1100, 2000.
2. Two courses chosen from Business 5700, 6700; Political Science 3540, 3741; Municipal Administration 1701, 2705.

## 2 Certificate Course Descriptions

In accordance with Senate's *Policy Regarding Inactive Courses*, the course descriptions for courses which have not been offered in the previous three academic years and which are not scheduled to be offered in the current academic year have been removed from the following listing. For information about any of these inactive courses, please contact the Head of the Department.

Certificate courses are specially designed courses relating to specific areas of study for which no equivalent degree credit course exists and are not applicable towards an existing diploma or degree program.

### 2.1 Career Development

Courses in the Certificate in Career Development are designated by CADV.

**1000 Career Development I** will be defined and described from theoretical perspectives. In this course, students will address the need for, the purpose of, and the uses for theory within career development. Conventional, as well as contemporary, theories and approaches of career development will be studied.

**1100 Assessment in Career Development I** will explore the relevant theories surrounding the nature of assessment as it pertains to the various facets of career development. Reasons for and application of research pertaining to assessment tools will be reviewed. Application of assessment tools to current settings will be encouraged.

**1200 Interpersonal Communications** is an examination of the communication process as related to career development will be explored. Particular attention will be paid to the development of interpersonal communication skills required for individual, group, and written work required of career practitioners.

**1210 The Nature of the Helping Relationship** will provide learners with a basic understanding of how helping relationships are defined as well as evolve within career development contexts. The course will focus on a number of factors which may influence the helping relationship, including existing theoretical foundations; the implications of legislation and mandate on service providers and how practitioner and client relationship can be impacted by both; emerging trends (based on research) in the career development field; the influence of existing resources (human, organizational, financial and technological) on shaping the helping relationship; and the helping relationship as a facilitative process.

**1220 Group Facilitation** covers the fundamentals of group learning, group processes, roles and leadership in career development settings. Emphasis is on the principles of adult learning and the role of a facilitator.

**1300 The Nature of Work, the Workforce and the Workplace** focuses on understanding local and global economies and the impact of environment, demographics, information and technology. Understanding the concept of "work" and the changing workplace, particularly job sharing, contracting, telecommuting, and entrepreneurship (including forced entrepreneurs).

**2000 Career Development II** provides students with the opportunity to appraise theories/approaches of career development. Guidelines for the understanding of the principles of sound theory formulation will be used in the critical evaluation of career development theories/approaches. This course will provide students with practical skills in the application of career development theories/approaches for the purpose of designing interventions for the respective populations.  
Prerequisite: CADV 1000.

**2001 Career Development for Special Populations** presents an overview of career development by examining career exploration, career planning, and career counselling theories and their particular application to various target groups. These groups include (but are not limited to) women, youth at risk, visible minorities, persons with disabilities, and aboriginal and native populations. An examination of the barriers to employment that exist for each group will be explored. As well, strategies enabling career development practitioners, employment counsellors, employers and other interested individuals to diminish these barriers will be examined.

**2100 Assessment in Career Development II** provides students, through a review and analysis of the various instruments used for assessment in career guidance and counselling, an opportunity to review in-depth selected instruments and apply them to specific individuals, groups and cultures. A

review of various career planning, interest inventory, vocational and aptitude tests will be further explored for future use in practice.  
Prerequisite: CADV 1100.

**2200 Program Design, Implementation, and Evaluation** provides learners with basic concepts related to designing programs, implementation and evaluation strategies within the context of specific career development intervention for targeted populations. The course will focus on conducting a needs analysis; designing a framework for implementation in relation to identified needs; developing an ongoing monitoring system, using appropriate technological resources; designing and implementing an evaluation strategy which is incorporated into the program design; and preparing a funding proposal.

**2300 The Emerging Economy** provides a general introduction to the emerging economy of the twenty-first century. The multidimensional dynamics of the global economy will be examined in light of the implications for Career Education Programming. The diverse political, economic, social, psychological, and educational variables will be studied as they influence the context for Career Development interventions (both for the individual and for groups). The knowledge, attitudes, and skills needed for the emerging economy will be identified and will guide the content of the course.

**3000 Practicum in Career Development** is comprised of supervised activities and/or projects designed to have the student implement career development theory and principles in real-life settings, integrate and apply knowledge gained in the prerequisite courses, and gain exposure to the practice of career development in the field.  
Prerequisites: CADV 1000, 1100, 1200, 1210, 1220 and 1300.

### 2.2 Criminology

**1302 Criminal Procedure and the Administration of Criminal Justice** examines the flow of criminal matters through the criminal justice system. Topics include the investigation into criminal complaints, search and seizure, arrest, release (bail), elections and pleas, preliminary inquiries, trials, sentencing, appeals and the ultimate disposition.

**1303 Corrections in the Criminal Justice System** examines the role of corrections in the Canadian criminal justice system which seems to be in constant change. These changes will be reviewed, updated and evaluated as we look at the two-dimensional role of corrections in justice: correctional institutions (prisons) and the community/after-care functions. Includes a review of new Canadian legislation affecting the above areas, as well as an examination of sentencing options and the Canadian pardon system.

**3301 Selected Topics in Criminology**

### 2.3 Library Studies

**1601 Introduction to Libraries** introduces students to the organization, functions, and services in various types of libraries. The course will also cover some aspects of the history of libraries, ethical considerations in library work (freedom of information and access, copyright), and collection development.

**1602 Technical Processing** explains the theory and practice of the various aspects of technical processing: acquisitions, cataloguing, classification, serials and circulation.

**1603 Reference** examines reference services, the reference interview and search strategies. Reference sources, materials and research methods will be examined.

**1604 Adult Services** covers library services directed towards adults, with an emphasis on the genres of fiction and non-fiction works, the promotion of literacy and leisure reading, and reference tools.

**1605 Children's Services** looks at fiction and information books appropriate for children from birth to teenage years. Coverage will include library publicity and the promotion of books through children's programming.

**1606 Computers in Libraries** is an introduction to the use of microcomputers in libraries. Section one explores microcomputers and their uses. Section two will introduce the use of computers in libraries such as integrated library systems, local area networks and CD-ROMS. The course will provide students with a well-rounded review of current library technologies and issues.

**1609 Managing Libraries** is an introduction to the management function in the library setting, including job descriptions, policies and procedures, legal aspects, budgeting, organizational structure and interrelationships, and public relations.

**1610 Library Services for Business and Industry** focuses on the provision of library services to business and industry, with emphasis on specific strategies for providing information to business and industry users, the role of in-house information services and libraries, and the interaction between the library, management, and administration in business and industry settings.

**1611 Multimedia Operations in the Library Setting** covers current trends in the information revolution, and their effect on communications in the library setting. Students will be introduced to applications of multimedia to library work, including audiovisual resources, desktop publishing and other software, computer networking, and the creation of promotional materials. The course is intended to be a hands-on introduction to these applications.

**2606 Computers in Libraries II** is a continuation of topics covered in Library Studies 1606 with special reference to the Internet and World Wide Web.  
Prerequisite: Library Studies 1606.

**3600 Directed Research/Project** allows students to develop and work on a research paper or project under the direction of a Library Studies instructor/facilitator, and with approval from the Advisory Committee.  
Prerequisite(s): any two Library Studies courses below the 3000 level.

**3601-3609 Special Topics in Library Studies** examines specific courses developed to meet particular needs, new topics, and current trends in library studies work.  
Prerequisite(s): any two Library Studies courses below the 3000 level.

### 3 Diploma in Information and Communications Technology

The Diploma in Information and Communications Technology is designed to provide individuals already possessing a post-secondary diploma or degree in any field with the knowledge and skills required to work in today's high technology environment. The program will benefit individuals from a wide variety of backgrounds, including business, education, technical, and administrative.

The program is offered in a collaborative learning environment with a problem-solving focus. The instructors are experienced and industry-certified by Microsoft and Cisco. The Division of Lifelong Learning is the Cisco Regional Academy for Newfoundland and Labrador; Cisco is a world leader in networking for the Internet.

Two options are available for completion of the Diploma in Information and Communications Technology:

1. Option 1. is taken on a full-time basis and is comprised of three semesters and consists of 32 credit hours and one work term.
2. Option 2. is comprised of 35 credit hours and can be taken full-time in three semesters or part-time in seven semesters.

#### 3.1 Program Objectives

The program focus is on four areas: E-Commerce, networking, programming, and databases.

Graduates of the program will:

1. Enhance their academic and other credentials with practical technology skills.
2. Obtain skills and knowledge that will prepare them to work effectively within a high technology environment.
3. Demonstrate the ability to work as part of a team.
4. Develop skills required to analyze an organization's information and communications technology needs and design a customized solution.

#### 3.2 Admission Requirements

Applicants to the Diploma in Information and Communications Technology normally must have successfully completed a three-year diploma or degree from an accredited post-secondary institution and attained a minimum of 65% on the last 15 courses completed. Admission to the program is limited and competitive. Application to the program must be made in writing to the Division of Lifelong Learning on the appropriate form, and must include an official transcript of post-secondary marks. Applications must be submitted by June 1 for Fall semester, October 1 for Winter semester, and February 1 for Spring semester. Applications received after these deadlines will be considered only if a place is available. In addition, students who have not registered for courses at Memorial University of Newfoundland for either of the two immediately preceding semesters must also complete an application for admission/readmission to the University.

Selection of candidates will be based on academic performance and on other criteria considered suitable for an information technology professional, including but not limited to evidence of the ability to cope with a demanding schedule or demonstrated mathematical ability.

Candidates pursuing Option 2. will be required to have at least one year of full-time work experience or equivalent.

#### 3.3 Program Requirements

The Diploma in Information and Communications Technology consists of the set curriculum outlined below. All courses are specifically designed for the Diploma in Information and Communications Technology only, and are not applicable towards any other existing degree or diploma program. Courses are normally offered sequentially in an accelerated format. Students enrolled in Option 1. will be required to complete a work term component. A work term is not available under Option 2., however, a substantial project (INFO 4500) will be required of each participant prior to completion of the program. Students completing the program on a part-time basis must do so within three calendar years from the date of admission to the program. Students completing the program on a full-time basis must do so within four semesters from the date of admission to the program.

#### 3.4 Evaluation, Continuance and Transfer

The passing grade for each course is 65%. A pass must also be awarded for the work term. Evaluation may include, but not be limited to, any or all of the following: projects, assignments, examinations, and class participation.

Students who obtain a numerical grade of less than 65% in no more than two of the Diploma in Information and Communications Technology courses will be given a probationary promotion and will be required to repeat the course(s) in the next semester in which it (they) is (are) offered.

### 2.4 Municipal Administration

**1701 Introduction to Municipal Accounting** - inactive course.

**1702 Introduction to Local Government** - inactive course.

**2703 Municipal Law** - inactive course.

**2704 Municipal Financial Administration** - inactive course.

**2705 Municipal Administration** - inactive course.

**2706 Municipal Planning and Community Development** - inactive course.

**2707 Selected Topics in Municipal Administration**

### 2.5 Records Management

**1000 Introduction to Records Management** - inactive course.

**1001 System and Functions in Records Management** - inactive course.

**1100 Introduction to Archival Science** - inactive course.

**2000 Records Classification Systems** - inactive course.

The foregoing notwithstanding, students will be required to withdraw from the Diploma in Information and Communications Technology program if:

1. a final numerical grade of less than 65% is obtained in more than two courses, or
2. a final numerical grade of less than 65% is obtained in a repeated course, or
3. a final numerical grade of less than 50% is obtained in any one course.

Students may be considered for readmission by the Admissions Committee, Division of Lifelong Learning.

Students who choose to drop a course(s) are strongly encouraged to consult with the Division of Lifelong Learning to ensure their program can be completed within the specified time.

Students may be permitted to transfer between options at the end of semester one with approval from the Division of Lifelong Learning.

### 3.5 Work Term

Students accepted into Option 1. of the program will complete the work term component during the third semester of the Diploma in Information and Communications Technology program. The dates for starting and finishing the work term are shown in the University Diary. To be eligible for the work term, students must have successfully completed all other courses in the program. Successful completion of the work term requirement is a prerequisite to graduation from the Diploma in Information and Communications Technology.

General management of the work terms is the responsibility of the Division of Lifelong Learning. It is responsible for assisting potential employers to become involved in the program, for the continual development of employment opportunities, for arranging student-employer interviews, for counselling of students, for visiting students on their work assignments and for the evaluation of the work term. Students are also encouraged to seek out suitable work term placements.

Students and employers choose each other through the placement competition process. Employers interview students, and both the students and employers express their preferences. Placement is not guaranteed but every effort is made to ensure that appropriate employment is made available.

Students accepted into the Diploma in Information and Communications Technology, Option 1., give permission to the Division of Lifelong Learning to supply their resumes and transcripts to prospective employers.

Salaries paid to students are determined by employers and are based upon their internal wage structures. However, students should not expect the income from work terms to make them completely self-supporting.

Students may obtain their work term placements outside the competition. Such work terms must be confirmed by the employer, and be approved by the Division of Lifelong Learning before the first day on which the student commences work.

A student may, with the permission of the Division of Lifelong Learning, be self-employed during a work term provided that the student and the Division of Lifelong Learning agree at the start of the work term on the information to be provided to the Division so that it can evaluate the student's work during the term.

A student who is unable to obtain a work term or work in approved self employment within four weeks from the start of the work term will be expected to undertake work under contract to a client within a faculty, another entity of the University, a company, municipality, non-profit organization, or the like. The contract work may be part-time, or occupy only a portion of a semester, and may allow the student to earn an income in other ways. The contract, whether paid or unpaid, must be approved by the Division of Lifelong Learning.

When neither an approved full-time work term nor an approved contract has been obtained, the Committee on Undergraduate Studies may approve a program which provides these students with technical and professional experience expected in the work term. The program must be such that the development, including the development of the students' communication skills, through the program can be monitored and assessed by the Division of Lifelong Learning with criteria equivalent to those used for full-time work term positions.

A work term report must be submitted. This report will be assigned by the Division of Lifelong Learning. Evidence of the student's ability to gather material relating to the job, analyze it effectively and present it in a clear, logical and concise form, will be required in the report. Late reports will not be evaluated, unless prior permission for a late report is given.

The evaluation of the work term is the responsibility of the Division of Lifelong Learning. Two components are considered in work term evaluation: on-the-job performance and the work term report. Each component is evaluated separately.

Evaluation of the work term will result in the assignment of one of the following recommendations:

**PASS WITH DISTINCTION:** Indicates excellent performance in both the work report and work performance. The student is commended for his/her outstanding performance in each of the required components; pass with distinction has been awarded to each of the work report and work performance.

**PASS:** Indicates that performance meets expectations in both the work report and work performance. The student fully meets the requirements of a passing work report and completely satisfactory work term performance.

**FAIL:** Indicates failing performance in the work report and/or work performance.

On-the-job performance is assessed by the Division of Lifelong Learning in conjunction with the employer.

If a student fails to achieve a passing grade from a work term, the student will normally repeat that work term in a work situation approved by the Division of Lifelong Learning. A given work term may be repeated only once during the program.

Students who fail to honour an agreement to work with an employer, or who drop a work term without prior approval of the Division of Lifelong Learning, or who conduct themselves in such a manner as to cause their discharge from the job, will normally be awarded a failed work term.

Permission to drop a work term does not constitute a waiver of diploma requirements, and students who obtained such permission must complete an approved work term in lieu of the one dropped.

### 3.6 Awarding of Diploma

Once all course requirements have been successfully completed, application for awarding of the Diploma must be made in writing on the appropriate form to the Office of the Registrar, Memorial University of Newfoundland.

### 3.7 Course Load

Full-time students in semester one will complete 16 credit hours.

Full-time students in semester two will complete 16 credit hours.

Full-time students may register for an additional 3 credit hour course while on the work term.

### 3.8 Course List

Note: All courses, unless otherwise noted, consist of laboratory and classroom sessions.

Courses in the Diploma in Information and Communications Technology program are designated by INFO.

**1000 Computer Technology (2 cr. hrs.)** provides an overview of computer technology and introduces computer basics. Students will become familiar with the basic parts of computer systems and their functions while learning troubleshooting techniques and distinguishing between hardware and software problems. Configuring hardware through the operating system and component failure will be discussed. Understanding of these topics will be enhanced by dismantling and assembling a computer. *This course is a prerequisite for all other Information Technology courses.*

**2100 Operating Systems I (1 cr. hr.)** is a study of operating systems. Features and benefits of the Windows environment will be discussed in detail.

Prerequisite: Information Technology 1000.

**2200 Networking Systems I (2 cr. hrs.)** is a study of the most commonly used networking systems. Topics include fundamentals of LAN theory; LAN protocols; network topologies; network security; basic network communication options; and network management.

Prerequisite: Information Technology 2100.

**2300 Internet Applications (1 cr. hr.)** is a study of the Internet and its applications. Topics will include advanced searching techniques, programming languages used in developing applications for the World Wide Web, and creating and maintaining WWW sites.

Prerequisite: Information Technology 1000.

**2500 Analysis and Design of Information Systems (1 cr. hr.)** is a study of information systems analysis and design concepts, methodologies and tools. The focus will be the purpose of the survey, study, design and implementation of an information system. Topics will include the systems development life cycle, fact finding techniques, process modelling, data flow diagrams and cost benefit analysis.

Prerequisite: INFO 1000.

**3111 Learning UNIX and Linux (2 cr. hrs.)** is an introduction to UNIX/Linux and the most commonly used features of UNIX-like operating systems in an enterprise server environment.

Prerequisite: Information Technology 2100.

Note: *Credit cannot be obtained for both INFO 3111 and the former 3110.*

**3200 Networking Systems II (2 cr. hrs.)** is a continuation of the more advanced features of networking systems.

Prerequisite: Information Technology 2200.

**3301 Introduction to Programming (2 cr. hrs.)** is an introduction to the fundamentals of structured programming. Topics include: algorithms, program structures, software design methodology, language constructs, data file basics, and abstract data types.

Prerequisite: Information Technology 2100.

Note: *Credit cannot be obtained for both INFO 3301 and the former INFO 3300.*

**3310 Windows Programming (2 cr. hrs.)** is a study of the fundamental elements of programming in a Windows environment. Topics will include: building a Windows Graphical Interface and the introductory concepts of object-oriented programming.

Prerequisite: Information Technology 3330.

**3315 Introduction to Databases (1 cr. hr.)** is the study of the effective use of databases, including design and implementation, and their use in addressing a business data problem.

Prerequisite: Information Technology 1000.

Note: *Credit cannot be obtained for both INFO 3315 and the former INFO 3400.*

**3320 Programming with Databases (2 cr. hrs.)** is a study of applications basics, basic data types, understanding objects and collections, coding for

events, writing RDBMS, controlling programs, testing and debugging the application, run-time errors, and distributing the application.

Prerequisites: Information Technology 3310 and Information Technology 3315.

**3330 Object Oriented Programming (2 cr. hrs.)** is an introduction to object-oriented programming. Topics include: encapsulation, information hiding, inheritance and polymorphism.

Prerequisite: Information Technology 3301.

**3350 Introduction to SQL (2 cr. hrs.)** provides an overview of data server technology and SQL programming language. Topics include creating and maintaining database objects including storing, retrieving and manipulating data. The course will teach how to write SQL script files to generate report-like output.

Prerequisite: Information Technology 3315.

**3360 Relational Database Administration (2 cr. hrs.)** provides a firm foundation in basic database administrative tasks. The course offers a conceptual understanding of database architecture and how the architectural structures work and interact. Topics include creating an operational database and properly managing its various structures in an effective and efficient manner.

Prerequisite: Information Technology 3350.

**3370 Relational Database Forms and Reports (2 cr. hrs.)** will teach developing and deploying applications using forms and reports. Topics include customizing forms through user input items and controlling data access through the creation of event-related triggers for connectivity to an SQL server.

Prerequisite: Information Technology 3360.

**3431 E-commerce and Intranet (2 cr. hrs.)** is an examination of the elements that define e-commerce and Intranet applications. Major elements are the concept, design and construction of web-based data applications involved in both commerce transaction processing and internal resource databases.

Prerequisites: Information Technology 2300.

Note: *Credit cannot be obtained for both INFO 3431 and the former INFO 3430.*

**3440 Integrated Business Solutions (1 cr. hr.)** is an introduction to the techniques involved in analyzing a company's information technology needs, and designing a customized solution.

Prerequisites: INFO 3431.

**3450 Networking Systems III (3 cr. hrs.)** is an advanced study of switching techniques and wide area networks.

Prerequisite: Information Technology 3200.

**4500 Case Study / Student Project (3 cr. hrs.)** (restricted to students in Option 2) is a comprehensive analysis of an assigned case. A written report will be required. Skills and knowledge developed throughout the program will be utilized in solving business-related problems. Using a case approach, students will work in teams to evaluate a company's IT resources and prepare a proposal for a solution that will meet the company's needs. A plan will be generated with suitable phases for implementing the solution. Evaluation will be based on effectiveness of the solution, demonstrated understanding of methodology and available technology, and the clarity, conciseness, and logic of the presentation style.

Prerequisite: Successful completion of all other course work, or approval of the Director of the Division of Lifelong Learning, or delegate.

**460W Work Term** (restricted to students in Option 1) provides opportunities for students in the program to apply theories and skills learned in the classroom to workplace settings. As one component of the work term the student is required to complete a work report which should: analyze an issue/problem related to the student's work environment demonstrate an understanding of the structure of a professional report show competence in written communication and presentation skills.

Prerequisite: Successful completion of all other course work.

## 4 Personal Enrichment and Career Enhancement Courses

The Division of Lifelong Learning offers more than 150 courses/seminars/workshops per semester in general interest and professional development. These offerings are non-credit in nature and there are no formal admission requirements. Program areas include communications, business, computer technologies, languages, marine, writing, the arts, and courses for children and youth. Instructors are drawn from the University and the community and are usually recognized for their achievements in their fields of instruction.

These offerings are an excellent continuing education service. They serve as a valuable introduction to the university setting for persons interested in pursuing diploma or certificate studies. General interest and professional development courses are generally offered on-campus during the Fall, Winter, and Spring semesters.

The Division also administers diploma and certificate programs that are outside of the mandates of other academic units. Certificate programs are short (6 to 10 courses) ranging from being comprised of all degree credit courses to being comprised of all certificate credit courses, or some combination of the two. Certificate programs are offered in business administration, municipal administration, public administration, criminology, Newfoundland studies, library studies, and career development. All of the seven certificate programs are available through distance education.

The Division offers customized corporate education and training to help business, industry, and public sector agencies achieve their business objectives. It works with clients to identify their professional development needs, customize the appropriate training and materials, and deliver and evaluate the seminars and workshops.

Further information on courses or programs administered by the Division of Lifelong Learning may be obtained by contacting the Division in writing to the Division of Lifelong Learning, Memorial University of Newfoundland, St. John's, NL A1C 5S7, or by telephone to (709) 737-7979, or by fax to (709) 737-8486, or by e-mail at [lifelong.learning@mun.ca](mailto:lifelong.learning@mun.ca), or through the website at [www.mun.ca/lifelonglearning](http://www.mun.ca/lifelonglearning).

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FACULTY OF ARTS

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# FACULTY OF ARTS

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**Interim Dean**

Wolinetz, S.B., B.A. *Cornell*, M.A., M.Phil., Ph.D. *Yale*; Professor of Political Science

**Associate Dean (Research and Graduate)**

Simms, É.L., B.Sc. *Montréal*, M.Sc. *Sherbrooke*, Ph.D. *Montréal*; Associate Professor of Geography

**Associate Dean (Undergraduate)**

Ayres, P.C.R., M.A., Dip. Ed., B.Litt. *Oxon*; Associate Professor of French and Spanish

**Manager, Finance and Administration**

Royle, D., B.Comm. *Memorial*, C.M.A., C.F.P.

**DEPARTMENT OF ANTHROPOLOGY****Head**

Fife, W., B.A.(Hons.) *Winnipeg*, M.A. *Western Ontario*, Ph.D. *McMaster*; Associate Professor

**Professores Emeriti**

Briggs, J.L., M.A. *Boston*, Ph.D. *Harvard*, F.R.S.C.; University Research Professor, Awarded 1986, Henrietta Harvey Professor, 1994-1997

Leyton, E.H., B.A., M.A. *British Columbia*, Ph.D. *Toronto*

Paine, R.P.B., M.A., D.Phil. *Oxon*, F.R.S.C.; Henrietta Harvey Professor, 1973-1994, C.M.

Tuck, J.A., A.B., Ph.D. *Syracuse*, F.R.S.C.; University Research Professor, Awarded 1984; Director, Institute of Social and Economic Research; Henrietta Harvey Professor, 1999-present

**Honorary Research Professors**

Andersen, R.R., B.A. *Knox*, M.A. *Emory*, Ph.D. *Missouri*

Chiaramonte, L.J., B.A. *Brandeis*, M.A. *Columbia*

Nemec, T.F., B.A., M.A., Ph.D. *Michigan*

Tanner, A., B.A., M.A. *British Columbia*, Ph.D. *Toronto*

**Professors**

Brown, S.C., B.A. *Melbourne*, Ph.D. *Toronto*

Deal, M., B.A. *Dalhousie*, Ph.D. *Simon Fraser*;

Pope, P.E., B.A. *Princeton*, M.Litt. *Oxford*, M.A., Ph.D. *Memorial*; Winner of the President's Award for Outstanding Research, 2001-2002; Chair, Maritime Studies Research Unit

Renouf, M.A.P., B.A., M.A. *Memorial*, Ph.D. *Cantab.*; Winner of the President's Award for Outstanding Research 1992-1993; Canada Research Chair in North Atlantic Archaeology

**Associate Professors**

Clark, J.R., B.A. *Memorial*

Jerkic, S.M., B.A. *Beloit College*, M.A., Ph.D. *Toronto*

Rankin, L., B.A. *British Columbia*, M.A. *Trent*, Ph.D. *McMaster*

Roseman, S.R., B.A.(Hons.) *Toronto*, M.A., Ph.D. *McMaster*; Winner of the President's Award for Outstanding Research 2002-2003

**Assistant Professors**

Carbonella, A., B.A., M.A., Ph.D. *City University of New York*

Gaulton, B., B.A., M.A., *Memorial*

Gordon, K.E., B.A.A. *Ryerson*, M.A. *Windor*, Ph.D. *York*

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Tate, M., B.A. *York*, M.Sc. *London*, Ph.D. *London School of Economics*

Whitaker, R., B.A. (Hons.) *Memorial*, M.A. *York*, Ph.D. *California*

Whitridge, P.J., B.A. *University of Toronto*, M.A. *McGill University*, Ph.D. *Arizona State University*

**Adjunct Professors**

Ramsden, P., B.A. *Toronto*, M.A. *Calgary*, Ph.D. *Toronto*

Sider, G., B.A. *Pennsylvania*, M.A. *Toronto*, Ph.D. *New School for Social Research*

**DEPARTMENT OF CLASSICS****Head**

Allen, T.J., B.A. *Amherst*, M.A. *Texas at Austin*, Ph.D. *Alberta*; Assistant Professor

**Professor**

Butrica, J.L., B.A. *Amherst*, M.A., Ph.D. *Toronto*; Winner of the President's Award for Outstanding Research, 1986-1987

**Assistant Professors**

Levett, B., B.A. *Trent*, M.A. *Calgary*, Ph.D. *Washington*

Robertson, G.I.C., B.A. *Toronto*, M.Phil., D.Phil. *Oxford*

Simonsen, K., B.A. *British Columbia*, M.A., Ph.D. *Toronto*

**Visiting Lecturer**

Surtees, A., B.A. *New Brunswick*

**DEPARTMENT OF ECONOMICS****Head**

Roy, N., B.A. *McGill*, Ph.D. *Johns Hopkins*; Professor

**Professor Emeritus**

Schrank, W.E., B.Mech.Eng. *Cooper Union*, M.Indl.Eng. *New York*, M.S., Ph.D. *Wisconsin*

**Professors**

Feehan, J.P., B.A. *Memorial*, M.Sc. *London School of Economics*, Ph.D. *Carleton*; Director, J.R. Smallwood Foundation

Locke, L.W., B.Sc., B.A. *Memorial*, M.A., Ph.D. *McMaster*

May, J.D., B.Comm. *Queen's*, D.Phil. *York (England)*

Tsoa, E.Y., B.A. *Taiwan*, M.A., Ph.D. *Notre Dame*

Wernerheim, C.M., B.A. *Simon Fraser*, Ph.D. *Uppsala*

**Associate Professors**

Chu, K.H., B.Soc.Sc. *Hong Kong*, M.Phil. *Chinese University of Hong Kong*, Ph.D. *Toronto*

Riser, G.E., B.S. *Utah*

**Assistant Professors**

Lynch, S.J., B.A. *Wilfrid Laurier*, M.A. *McMaster*

Pyne, D., B.A., M.A., Ph.D. *York*

Waples, M.J., B.Ec.(Hons.) *Sydney*, M.A. *Waterloo*, Ph.D. *McMaster*, C.A. *Australia*

**DEPARTMENT OF ENGLISH LANGUAGE AND LITERATURE****Head**

Hollett, R., B.A., M.Phil. *Memorial*; Associate Professor

**Professores Emeriti**

Buchanan, R., B.A. *Keele*, Ph.D. *Birmingham*

Gardner, P.G., M.A. *Cantab.*, Ph.D. *Liverpool*, F.R.S.L.; University Research Professor, Awarded 1988

Kirwin, W.J., B.A. *Bowdoin*, M.A., Ph.D. *Chicago*, D.Litt. *Memorial*

Macdonald, A.A., M.A. *Aberdeen*, B.Litt. *Oxon*, Ph.D. *Manchester*, I.O.M., L.F.I.B.A.

Miller, E., B.A., B.A.(Ed.), M.A., Ph.D. *Memorial*; Winner of the President's Award for Distinguished Teaching, 1991-92

O'Flaherty, P.A., M.A. *Memorial*, Ph.D. *London*

Pitt, D.G., B.A. *Mount Allison*, M.A., Ph.D. *Toronto*, LL.D. *Mount Allison*; Honorary D. Litt., *Memorial*

**Honorary Research Professors**

Artiss, P., Dip. Ed. *Acadia*, M.A.(Hons.) *Edinburgh*, Ph.D. *Texas*; Winner of the President's Award for Distinguished Teaching, 1999-2000

Gardner, P.G., M.A. *Cantab.*, Ph.D. *Liverpool*, F.R.S.L.; University Research Professor, Awarded 1988

**Professors**

Byrne, P.A., B.A. *Iona*, M.A., Ph.D. *Memorial*; Cross appointment, Department of Folklore

Cumming, M.D., B.A.(Hons.) *Wilfrid Laurier*, B.Ed. *Lakehead*, M.A., Ph.D. *Western Ontario*, Winner of the President's Award for Outstanding Research, 1989-1990

Dalton, M., B.A.(Hons.) *Toronto*, M.A. *Memorial*

Golfman, N., B.A. *Alberta*, M.A., Ph.D. *Western Ontario*

Jones, G.P., B.A. *Leeds*, M.A. *McMaster*, Ph.D. *London*

Lynde, D.C., B.A.(Hons.) *Queen's*, M.A., Ph.D. *Toronto*

Nichol, D.W., B.A.(Hons.), M.A. *Carleton*, Ph.D. *Edinburgh*; Winner of the President's Award for Outstanding Research, 1993-1994

O'Dea, S., B.A., M.A. *Memorial*, Winner of the President's Award for Distinguished Teaching, 1988-1989; Public Orator

O'Dwyer, B.T., B.A. *Saint Mary's*, M.A. *Memorial*, P.G.Dip. *The Hague*, Ph.D. *Edinburgh*; Cross appointment, Faculty of Medicine

Rompkey, R.G., O.C., C.D., M.A., B.Ed. *Memorial*, Ph.D. *London*, F.R.Hist.S.; University Research Professor, Awarded 2001

Schipper, W., B.A., M.A. *Windsor*, Ph.D. *Queen's*

Schrank, B., B.A. *Brooklyn*, M.A., Ph.D. *Wisconsin*

Shorrocks, G., B.A.(Hons.), P.G.C.E. *Birmingham*, M.A., Ph.D. *Sheffield*

Staveley, A., B.A.(Hons.), Post.grad. Dip.Ed. *Reading*, M.A., Ph.D.

*Memorial*; Winner of the President's Award for Distinguished Teaching, 1994-1995; Deputy Public Orator

#### Associate Professors

Ayers, P.K., B.A.(Hons.), M.A., Ph.D. *Toronto*  
Balisch, L.F., B.A. *King's College*, B.Ed. *Dalhousie*, M.A., Ph.D. *Memorial*  
Casey, G.J., B.A., B.A.(Ed.), M.A. *Memorial*, Ph.D. *Sheffield*  
Guthrie, J., M.A., P.G.C.E. *Edinburgh*, M.A. *McMaster*; Winner of the President's Award for Distinguished Teaching, 2002-2003; Coordinator, Women's Studies  
Ingersoll, S., B.A. *Mount Allison*, M.A. *Memorial*  
Jones, H., B.A.(Ed.), M.A. *Memorial*  
Kromm, S.G., B.A.(Hons.), B.Ed.(Hons.), M.A. *Memorial*, Ph.D. *London*  
Legge, V.E., B.A., B.Ed., M.A., Ph.D. *Memorial*  
Mathews, L.M., B.A.(Hons.), M.A. *Carleton*, Ph.D. *British Columbia*  
Vecchi, L.M., B.A. *Nazareth College of Rochester*, M.A. *St. Bonaventure Univ.*, Ph.D. *Western Ontario*  
Walsh, D., B.A., M.A. *Wyoming*

#### Assistant Professors

Clissold, B., B.A.(Hons.) *York*, M.A., Ph.D. *McGill*  
Farquharson, D., B.A. *Alberta*, M.A., Ph.D. *Memorial*  
Lockett, C., B.A. *York*, M.A. *Toronto*, Ph.D. *Western Ontario*  
Lokash, J., B.A.(Hons.), M.A., Ph.D. *McGill*  
Skidmore, J., B.A.(Hons.) *Queen's*, M.A., Ph.D. *Toronto*

#### Director of E.S.L. Programs

Benger, J., B.A. *McGill*, M.A. *Toronto*

### DEPARTMENT OF FOLKLORE

#### Head

Lovelace, M.J., B.A.(Hons.) *Wales*, M.A. *Alberta*, M.A., Ph.D. *Memorial*; Associate Professor

#### Professor Emeritus

Rosenberg, N.V., B.A. *Oberlin*, M.A., Ph.D. *Indiana*

#### Honorary Research Professor

Narváez, P.R., B.A. *Drew*, M.A., Ph.D. *Indiana*

#### Professors

Byrne, P.A., B.A. *Iona*, M.A., Ph.D. *Memorial*; Cross appointment, Department of English  
Diamond, B., B.Mus.(Hons.), M.A., Ph.D. *Toronto*; Canada Research Chair in Traditional Music and Ethnomusicology; Joint appointment, School of Music  
Pocius, G.L., B.S. *Drexel*, M.A. *Memorial*, Ph.D. *Pennsylvania*, Winner of the President's Award for Outstanding Research, 1988-1989; University Research Professor, Awarded 2002  
Smith, P.S., B.A., Ph.D. *Sheffield*

#### Associate Professors

Goldstein, D.E., B.A. *Memorial*, M.A., Ph.D. *Pennsylvania*; Winner of the President's Award for Outstanding Research, 1994-1995; Cross appointment, Faculty of Medicine  
Hiscock, P., B.A., M.A., Ph.D. *Memorial*  
Labelle, R., B.A., M.A., Ph.D. *Université Laval*; Joint appointment with Department of French & Spanish  
Szego, K., B.Mus. *Queen's*, M.A. *Hawaii*, Ph.D. *Washington*; Cross appointment with School of Music  
Tye, D., B.A. *Mount Allison*, M.A., Ph.D. *Memorial*

#### Assistant Professor

Thorne, C.W., B.Mus. *Memorial*, M.A., Ph.D. *Pennsylvania*

### DEPARTMENT OF FRENCH AND SPANISH

#### FRENCH

#### Head

O'Reilly, M., B.A.(Hons.) *Carleton*, M.A., Ph.D. *Ottawa*; Professor

#### Honorary Research Professors

Chadwick, A.R., B.A. *Manchester*, M.A. *McMaster*  
Champdoizeau, M., B.A., B.Péd. *Laval*, M.Ed. *Memorial*  
Hesson, I., M.A., P.G.C.E. *Glasgow*, M.A. *Memorial*, Ph.D. *London*  
Wilkshire, M.A., B.A. *Birmingham*, M.A. *Carleton*, D. Ille cycle *Dijon*

#### Professors

Bishop, N.B., B.A., B.Ed., M.A. *Saskatchewan*, D. Ille cycle *Université de Provence I*

Black, J.R., B.A.(Hons.) *Toronto*, M.A. *Memorial*, Ph.D. *London*; Joint appointment with Department of Linguistics  
Harger-Grinling, V., B.A., M.A., Dip Hons. *Auckland*, Ph.D. *British Columbia*  
Lemelin, J.-M., B.A., M.A., Ph.D. *Sherbrooke*  
Macdonald, A.A., M.A., Dip.Ed., M.Litt. *Aberdeen*, Ph.D. *Harvard*

#### Associate Professors

Ayres, P.C.R., M.A., Dip. Ed., B.Litt. *Oxon*; Associate Dean of Arts (Undergraduate)  
Gamble, D.R., B.A., M.A. *Toronto*, D.Phil. *Oxon*  
Jamieson, S., B.A. *Memorial*, M.A. *Laval*, D. Nouveau Régime *Sorbonne-Nouvelle*; First-year Coordinator  
Labelle, R., B.A., M.A., Ph.D. *Laval*; Cross appointment with the Department of Folklore  
MacLean, J., B.A.(Hons.), M.A. *British Columbia*, D. Ille cycle *Strasbourg II*  
Thareau, A., B.A., M.A. *Nantes*, Doctorat Nouveau Régime *Sorbonne-Nouvelle*  
Thomas, M., B.A. *Memorial*

#### Assistant Professors

Black, J.H., B.A.(Hons.) *Reading*, P.G.C.E. *London*, M.Ed. *Memorial*; Winner of the President's Award for Distinguished Teaching, 1995-1996  
Thistle, B., B.A.(Hons.) *Memorial*, M.A. *McMaster*, Ph.D. *Brown*

### SPANISH

#### Associate Professor

Salama, M., B.A. *Toronto*, M.A. *Queen's*, Ph.D. *Toronto*; Spanish Coordinator

#### Assistant Professor

Osorio, M., Licenciatura, *Bogota*, M.A., Ph.D. *Wisconsin-Madison*

### LANGUAGE LABORATORIES

#### Director

Thomeier, K., B.Sc., B.A. *Memorial*, M.A. *McMaster*, Ph.D. *Queen's*

### DEPARTMENT OF GEOGRAPHY

#### Head

Storey, K., B.A.(Hons.) *Leicester*, M.A. *Simon Fraser*, Ph.D. *Western Ontario*; Professor

#### Professores Emeriti

Handcock, W.G., B.A.(Ed.), B.A., M.A. *Memorial*, Ph.D. *Birmingham*  
Macpherson, A.G., M.A. *Edinburgh*, Ph.D. *McGill*  
Macpherson, J.C., B.Sc., M.Sc. *London*, Ph.D. *McGill*  
Sanger, C.W., B.A.(Ed.), M.A. *Memorial*, M.Ed. *Ottawa*, Ph.D. *Dundee*

#### Honorary Research Professor

Jacobs, J.D., B.A. *Adams State*, M.A., Ph.D. *Colorado*

#### Professors

Catto, N.R., B.Sc.(Hons.) *Queen's*, M.Sc., Ph.D. *Alberta*  
Sharpe, C.A., B.A.(Hons.) *Carleton*, M.A., Ph.D. *Toronto*  
White, R., B.A. *Swarthmore*, M.A., Ph.D. *North Carolina*; University Research Professor, Awarded 1997

#### Associate Professors

Bath, A.J., B.A.(Hons.) *Wilfrid Laurier*, M.A. *Wyoming*, Ph.D. *Calgary*  
Bell, T.J., B.A.(Hons.) *Trinity College Dublin*, M.Sc. *Memorial*, Ph.D. *Alberta*; Winner of the President's Award for Outstanding Research, 2000-2001  
Butler, K.G., B.Sc.(Hons.), B.Ed. *Memorial*, M.Sc. *McGill*; Winner of the President's Award for Distinguished Teaching, 1997-1998  
Simms, A., B.A. *Memorial*, M.Sc., Ph.D. *Calgary*; Cross appointment with the Division of Community Health, Faculty of Medicine  
Simms, É.L., B.Sc. *Montréal*, M.Sc. *Sherbrooke*, Ph.D. *Montréal*; Associate Dean (Research and Graduate), Faculty of Arts

#### Assistant Professors

Devillers, R., B.Sc.(Eq.) *Lyon 1*, M.Sc. *UQAM*, M.Sc. *Laval*, Ph.D. *Laval/Marne la Vallée*  
Edinger, E.N., B.A. *California*, M.Sc., Ph.D. *McMaster*; Joint appointment with Department of Biology  
Farish, M.J., B.A.(Hons.), Ph.D. *UBC*

**Adjunct Professors**

Batterson, M., B.A.(Hons) *Wales*, M.Sc., Ph.D. *Memorial*  
 Blackwood, G., B.Sc.(Hons.), M.A. *Memorial*  
 Forbes, D.L., B.A. *Carleton*, M.A. *Toronto*, Ph.D. *British Columbia*  
 Liverman, D.G.E., B.Sc.(Hons) *Edinburgh*, M.Sc., Ph.D. *Alberta*  
 McCuaig, S., B.Sc. *Concordia*, M.Sc. *Carleton*, Ph.D. *Simon Fraser*  
 Shaw, J., B.Sc. *Queen's University Belfast*, M.Sc., Ph.D. *New University of Ulster*  
 Shrimpton, M., B.A. *Reading*, M.A. *Memorial*

**DEPARTMENT OF GERMAN AND RUSSIAN****Head**

Ilgner, R.M., B.A.(Hons.) *Toronto*, M.A., Ph.D. *Waterloo*; Associate Professor

**Professor**

Durrant, J.S., B.A. *Western Ontario*, M.A. *Toronto*, Ph.D. *London*

**Associate Professors**

Buffinga, J.O., B.A., M.A. *Western Ontario*, Ph.D. *British Columbia*  
 Snook, J.M., B.A. *Toronto*, M.A. *Queen's*, Ph.D. *Waterloo*, A.R.C.T. *Toronto*

**Assistant Professor**

Röhlmann, M., B.A. *Indiana*, M.A. *McMaster*  
 White, F.H., B.A. *Ohio State*, M.A. *Kansas*, Ph.D. *Southern California*

**DEPARTMENT OF HISTORY****Head**

Youé, C.P., B.A. *Lancaster*, M.A., Ph.D. *Dalhousie*; CSU Teaching Award, 1998; Professor

**Professor Emeritus**

Bassler, G.P. Cand. Phil. *Munich*, Ph.D. *Kansas*

**Honorary Research Professors**

English, C.J.B., B.A. *Toronto*, B.Ed. *Memorial*, M.A., Ph.D. *Toronto*, LL.B. *Dalhousie*  
 MacLeod, M.K., B.A. *Dalhousie*, M.A. *Toronto*, Ph.D. *Ottawa*

**Professors**

Cherwinski, W.J.C., B.A., M.A. *Saskatchewan*, Ph.D. *Alberta*; Winner of the President's Award for Distinguished Teaching, 1997-1998  
 Connor, J.T.H., B.Sc. *Guelph*, M.A. *Western Ontario*, M.Phil., Ph.D. *Waterloo*; John Clinch Professor of Medicinal Humanities and History of Medicine; Cross appointment with Medicine  
 den Otter, A.A., B.A., *Dordt*, M.A., Ph.D. *Alberta*  
 Fischer, L.R., B.A. *SUNY*, M.A. *Toronto*, M.A. *York*, F.S.A., F.R.Hist.S.  
 Hiller, J.K., B.A. *Oxon*, M.A. *Memorial*, Ph.D. *Cantab.*, F.R.Hist.S.; University Research Professor, Awarded 2004  
 Panjabi, R.K., B.A., LL.B., M.A. *London*, Ph.D. *Peradeniya*  
 Pope, P.E., B.A. *Princeton*, M.Litt. *Oxford*, M.A., Ph.D. *Memorial*; Cross appointment with Department of Anthropology  
 Ryan, S.P., B.A.(Ed.), B.A., M.A. *Memorial*, Ph.D. *London*, F.R.Hist.S.  
 Sweeny, R.C.H., B.A. *Sir George Williams*, M.A. *Québec à Montréal*, Ph.D. *McGill*

**Associate Professors**

Bosák, E., B.A. *Brock*, B.Ed. *Memorial*, M.A. *Waterloo*, Ph.D. *London*  
 Burton, V.C., B.A., M.A. *Lancaster*, Dip.Ed. *Sussex*, Ph.D. *London*  
 Cadigan, S.T., B.A.(Hons.) *Memorial*, M.A. *Queen's*, Ph.D. *Memorial*  
 Connor, J.J., B.A. *Guelph*, M.A. *York*, M.Phil. *Waterloo*, Ph.D. *Western Ontario*; Joint appointment with Division of Community Health, Faculty of Medicine  
 Dawe, L., B.A. *Memorial*, M.A. *Toronto*  
 Hart, P., B.A. *Queen's*, M.A. *Yale*, Ph.D. *Trinity College, Dublin*; Canada Research Chair in Irish Studies

**Assistant Professors**

Bishop-Stirling, T.L., B.A. *Memorial*, M.A. *Queen's*  
 Brégent-Heald, D., B.A. *Toronto*, M.A. *George Washington*, Ph.D. *Duke*  
 Bryan, L., B.A.(Hons.) *Brock*, M.A. *McMaster*, Ph.D. *Toronto*  
 Curtis, S.M., B.A. *Brock*, B.Ed. *Lakehead*, M.A., Ph.D. *Carnegie Mellon*

**Adjunct Professors**

Baker, M., B.A.(Hons.), M.A. *Memorial*, Ph.D. *Western*  
 FitzGerald, J.E., B.A., B.Ed., M.A. *Memorial*, Ph.D. *Ottawa*  
 Kealey, G.S., B.A. *Toronto*, M.A., Ph.D. *Rochester*, F.R.Hist.S., F.R.S.C.; Winner of the President's Award for Outstanding Research, 1985-1986; University Research Professor, Awarded 1992  
 Kealey, L., B.A., B.L.S., M.A., Ph.D. *Toronto*, F.R.Hist.S.  
 Ommer, R.E., M.A. *Glasgow*, M.A. *Memorial*, Ph.D. *McGill*

**DEPARTMENT OF LINGUISTICS****Head**

MacKenzie, M.E., B.A., M.A. *McGill*, Ph.D. *Toronto*; Associate Professor

**Professores Emeriti**

Hewson, J., B.A. *London*, M. ès A., D. de l'U. *Laval*; University Research Professor, Awarded 1985; Henrietta Harvey Professor, 1997-1999  
 Nurse, D., B.A. *Manchester*, M.A., Cand. Phil. *Berkeley*, Ph.D. *Dar es Salaam*; University Research Professor, Awarded 1998; Henrietta Harvey Professor, 2004-2007

**Professors**

Black, J.R., B.A.(Hons.) *Toronto*, M.A. *Memorial*, Ph.D. *London*; Joint appointment with Department of French and Spanish  
 Bubenik, V., P.Ph., Ph.Dr. *Brno*; University Research Professor, Awarded 1996  
 Clarke, S.A., B.A. *Memorial*, M. ès A., D. ès L. *Laval*; University Research Professor, Awarded 1999

**Associate Professors**

Branigan, P., B.A., M.A. *Ottawa*, Ph.D. *M.I.T.*  
 Dyck, C., B.A.(Hons.) *Saskatchewan*, M.A., Ph.D. *Toronto*

**Assistant Professors**

Brittain, J., M.A.(Hons.) *Glasgow*, M.A., Ph.D. *Memorial*  
 Childs, B., B.A. *Florida*, M.A. *North Carolina*, Ph.D. *Georgia*  
 Rose, Y., B.A., M.A. *Université Laval*, Ph.D. *McGill*

**DEPARTMENT OF PHILOSOPHY****Head**

Bradley, J.A.J., B.A., M.A., Ph.D. *Cantab*; Professor

**Honorary Research Professor**

Simpson, E., B.A. *Amherst*, Ph.D. *Duke*

**Professors**

Scott, J.A., B.A. *Memorial*, B.A., M.A. *Cantab.*, Ph.D. *Edinburgh*  
 Thompson, D.L., B.Sc. *Alberta*, M.A. *West Virginia*, Ph.D. *Louvain*

**Associate Professors**

Okshevsky, W., B.A. *Concordia*, M.A. *York*, Ph.D. *OISE*; Cross appointment with Faculty of Education  
 Stafford, A.M., B.A., M.A. *Memorial*, Ph.D. *Edinburgh*  
 Trnka, P., B.A., M.A., Ph.D. *Toronto*

**Associate Professor of Medical Ethics**

Pullman, D., M.A., Ph.D. *Waterloo*, B.Ed. *Western*; Cross appointment with Faculty of Medicine

**Assistant Professors**

Oman, N., B.A. *Toronto*, M.A., Ph.D. *McGill*  
 Rajiva, S., B.A., M.A. *Concordia*, Ph.D. *Toronto*  
 Sullivan, A., B.A. *Memorial*, M.A., Ph.D. *Queen's*

**DEPARTMENT OF POLITICAL SCIENCE****Interim Head**

Boswell, P.G., B.A. *Toronto*, M.A., Ph.D. *Carleton*, A.C.I.S., P.AdM.

**Professors**

Bornstein, S.E., B.A. *Toronto*, M.A., Ph.D. *Harvard*; Director, Centre for Applied Health Research  
 Close, D.W., B.S.F.S. *Georgetown*, M.A. *Wayne State*, Ph.D. *McGill*  
 Dunn, C., B.A. *Manitoba*, M.A., Ph.D. *Toronto*  
 Tomblin, S.G., B.A. *Calgary*, M.A. *Dalhousie*, Ph.D. *British Columbia*  
 Wolinetz, S.B., B.A. *Cornell*, M.A., M.Phil., Ph.D. *Yale*; Interim Dean of Arts

**Associate Professors**

Croci, O., B.A. *Università di Venezia*, M.A. *Carleton*, Ph.D. *McGill*  
 Greene-Summers, V.A., B.A. *Memorial*, M.A. *York*, Ph.D. *Carleton*;  
 on leave  
 McGrath, W., B.A., M.A. *McMaster*, Ph.D. *Carleton*  
 Wallack, M., B.A. *City College, N.Y.*

**Assistant Professors**

Fournier, B., B.A., M.A. *Laval*, Docteur de l'Institut d'études  
*politiques de Paris*  
 Lawson, J., B.A. *Trent*, M.A. *Dalhousie*, Ph.D. *York*; on leave

**Adjunct Professors**

O'Brien, F.P., B.A. *Memorial*, LL.B. *Dalhousie*, LL.M. *Cambridge*  
 Vardy, D., B.A.(Hons.), B.Comm. *Memorial*, M.A. *Princeton*,  
*Toronto*

**Adjunct Associate Professor**

Penney, R.G., B.A. *Memorial*, LL.B. *Toronto*

**DEPARTMENT OF RELIGIOUS STUDIES****Head**

DeRoche, M.P., B.A.(Hons.) *Acadia*, M.Th. *Laval*, M.A., Ph.D.  
*McMaster*; Associate Professor

**Professor Emeritus**

Hodder, M.F., B.A. *McGill*, Dip. in Th. *United Theological College*,  
 P.G.Dip. in Th. *Edinburgh*, S.T.M., Th.D. *Boston*

**Professors**

Bell, D.N., M.A. *Leeds*, M.A., D.Phil. *Oxon*; University Research  
 Professor, Awarded 1994  
 Hawkin, D.J., B.D. *London*, P.G.C.E. *Leeds*, M.A., Ph.D. *McMaster*  
 Parker, K.I., B.A.(Hons.), M.A., Ph.D. *McMaster*  
 Rollmann, H., B.A. *Pepperdine*, M.A. *Vanderbilt*, Ph.D. *McMaster*;  
 Winner of the President's Award for Outstanding Research,  
 1986-1987

**Associate Professors**

Porter, J., B.A.(Hons.) *Queen's*, M.A., Ph.D. *McMaster*  
 Rainey, L.D., B.A., M.A., Ph.D. *Toronto*  
 Shute, M.R., B.A. *Acadia*, M.T.S. *Atlantic School of Theology*,  
 S.T.L., S.T.D. *Regis*, Th.D. *Toronto*

**Assistant Professor**

Dold, P., B.A.(Hons.), M.A. *Calgary*, Ph.D. *McMaster*

**1 Limited Enrolment Courses**

Certain course offerings in the Faculty of Arts will be identified as being Limited Enrolment Courses and will be clearly identified as such in the University Timetable. Students who have registered for a Limited Enrolment Course must confirm their registration either (1) by attending at least one of the first three hours of lectures in the course (and the first meeting of any laboratory section of the course, if appropriate); or (2) by notifying the department in writing within the first five university working days of the semester. Students who do not confirm their registration may be dropped from the course on the recommendation of the Head of Department.

**2 Degree Regulations**

In these regulations, all references to Heads of Departments and Program Supervisors are to be read as "Head of Department or delegate" and "Program Supervisor or delegate".

**2.1 Regulations for the General Degree of Bachelor of Arts**

Students completing a degree program in the Faculty of Arts will normally follow the degree regulations in effect in the academic year in which they first entered Memorial University of Newfoundland. This is determined by the year of the student number. However, students may elect to follow subsequent regulations introduced during their tenure in the program.

**1. Degree Components**

The General Degree of Bachelor of Arts consists of the following components:

- courses from a set of Core Requirements, some of which may also satisfy requirements of the Major and Minor programs
- an approved concentration of courses known as the Major program
- an approved concentration of courses known as the Minor program
- elective courses

A candidate for the General Degree of Bachelor of Arts must complete a minimum of 120 credit hours in courses subject to the following regulations.

**2. Core Requirements**

All candidates must complete the following Core Requirements. Courses satisfying Core Requirements may also be used to satisfy requirements of Major and Minor programs, subject to Notes 1., 2. and 3. below:

- English Requirement.** Six credit hours in courses in English at the first-year level.
- Second Language Requirement.** Six credit hours in courses in a single language other than English, or demonstration of equivalent competency in a second language.

**DEPARTMENT OF SOCIOLOGY****Head**

Riggins, S.H., B.A., M.A. *Indiana*, Ph.D. *Toronto*; Professor

**Professor Emeritus**

Meja, V., Dip. Soz. *Frankfurt*, Ph.D. *Brandeis*

**Honorary Research Professor**

Zaslavsky, V.L., M.A. *Leningrad*

**Professors**

Felt, L.F., B.A. *Oberlin College*, Ph.D. *Northwestern*  
 House, J.D., B.A. *Memorial*, M.A. *Oxford*, Ph.D. *McGill*  
 Neis, B., B.A. *York*, M.A. *Memorial*, Ph.D. *Toronto*  
 Overton, D.J.B., B.Sc. *Hull*, M.A., Ph.D. *Western Ontario*  
 Porter, M., M.A. *Trinity College, Dublin*, Ph.D. *Bristol*; University  
 Research Professor, Awarded 2003  
 Schwartz, R., B.A., M.A. *California*, Ph.D. *Toronto*  
 Sinclair, P.R., M.A. *Aberdeen*, Ph.D. *Edinburgh*; University  
 Research Professor, Awarded 1992

**Associate Professors**

Adler, J., B.A. *California*, Ph.D. *Brandeis*  
 Crocker, S., B.A. *Memorial*, M.A., Ph.D. *York*  
 Hill, R., B.A. *Leicester*, M.A., Ph.D. *Brown*

**Assistant Professors**

Cullum, L., B.A. *Memorial*, M.A., Ph.D. *OISE*; Assistant Professor,  
 Women's Studies  
 Depelteau, F., B.A., M.A., Ph.D. *Laval*  
 Kenney, S., B.A., L.L.B. *Dalhousie*, M.A., Ph.D. *McMaster*  
 Micucci, A., B.A., M.A., Ph.D. *York*  
 Oleinik, A., MA (DEA), Ph.D. *EHESS, Paris*, Ph.D. *Moscow State*  
 Stanbridge, K., B.A., M.A., Ph.D. *Western Ontario*

**WOMEN'S STUDIES**

Guthrie, J., M.A., P.G.C.E. *Edinburgh*, M.A. *McMaster*; Winner of  
 the President's Award for Distinguished Teaching, 2002-2003;  
 Coordinator; Associate Professor, Department of English  
 Cullum, L., B.A. *Memorial*, M.A., Ph.D. *OISE, Toronto*; Assistant  
 Professor, Department of Sociology



- c. **Numeracy/Science Requirement.** Six credit hours in courses chosen from the Science list below.
- d. **Humanities Requirement.** Twelve credit hours in courses in at least two disciplines chosen from the Humanities List below. These courses are exclusive of the minimum requirements for English and a second language as stated in a. and b. above.
- e. **Social Sciences Requirement.** Twelve credit hours in courses in at least two disciplines chosen from the Social Sciences List below.  
Students who are concurrently completing the Bachelor of Commerce (Co-operative) degree should refer to the entry **Joint Degrees of Bachelor of Arts and Bachelor of Commerce (Co-operative)** immediately following these regulations.
- f. **Research/Writing Requirement.** Completion of 6 credit hours in courses in Social Sciences or Humanities which are designated research/writing courses will satisfy Clause 2. f. and may concurrently satisfy 6 credit hours from Clause 2. d. and/or 2. e. above.

Students are strongly advised to complete the Core Requirements within the first 60 credit hours of the undergraduate program.

- Notes: 1. To satisfy the minimum Core Requirements, students shall take no more than 9 credit hours in courses from any one discipline.  
2. Students may apply up to 9 credit hours of the Core Requirements towards the Major program and up to 9 credit hours of the Core Requirements towards the Minor program.  
3. Specific Core Requirements may also be satisfied by the demonstration of equivalent competency in accordance with **UNIVERSITY REGULATIONS - General Academic Regulations (Undergraduate)**, e.g., advanced standing, challenge for credit, etc.

#### Distribution of Humanities, Social Science, and Science:

**Humanities:** Classics, English, French & Spanish\*, German & Russian\*, History\*\*\*, Philosophy, Religious Studies, Law & Society 2000\*\*\*, Medieval Studies 2000, Women's Studies 2000\*\*\*

**Social Science:** Anthropology, Economics, Environmental Studies 1000 and 2000, Folklore, Geography\*\*, History\*\*\*, Linguistics, Political Science, Sociology, Law & Society 2000\*\*\*, Women's Studies 2000\*\*\*

**Science:** Biochemistry, Biology, Chemistry, Computer Science, Earth Sciences, Economics 2010 and 2020, Engineering, Environmental Science, Geography, Mathematics and Statistics, Physics, Psychology, Science 1000, 1150, 1151, 3000, 3001

\*Where a department offers two distinct disciplines, students who major and minor in that department can apply up to 18 credit hours from the Major and Minor to satisfy Core Requirements. For example, a student doing a German Major and a Russian Minor may complete 18 credit hours applicable to core requirements in courses in the Department of German and Russian: 9 credit hours in German to fulfill the second language requirement as well as 3 of the required 12 credit hours in a humanities discipline. The remaining 9 credit hours in Humanities could be fulfilled by Russian courses done for the Minor.

\*\*All non-laboratory Geography courses are designated Social Science courses. All Geography courses with laboratories are designated Science courses. The three-course limit in one department for meeting Core Requirements will apply.

\*\*\*Where a department or program is listed in both the Humanities and Social Science Lists, the three-course limit in one department for meeting Core Requirements will apply.

### 3. The Major Program

A candidate shall complete an approved concentration of courses to be known as the Major program, consisting of not fewer than 36 nor more than 45 credit hours taken in a subject listed in Clause 3. a. or 3. b. below.

- a. Major programs are available in the following subjects and are administered by departments: Anthropology, Classics, Computer Science, Economics, English Language and Literature, Folklore, French, Geography, German, History, Linguistics, Mathematics and Statistics, Philosophy, Political Science, Psychology, Religious Studies, Russian, Sociology, Spanish.
- b. Major programs are available in the following subjects which, because of their interdepartmental character, will each be administered jointly by the participating departments through a Program Supervisor. These programs shall require not fewer than 36 nor more than 54 credit hours for the Major.
  - i. Drama and Music
  - ii. Canadian Studies
  - iii. Medieval Studies
  - iv. Sociology/Anthropology
- c. A candidate who has completed courses in the area of the Major at another university is required to complete at least 12 credit hours in that subject at this University.
- d. A candidate must follow the regulations for the Major programs as set forth in the appropriate section of the Calendar.
- e. The Head of the Department or Program Supervisor of the Major program will advise the candidate on the selection of courses in the Major.
- f. In Departments which offer programs leading to both a degree of Bachelor of Arts and a degree of Bachelor of Science, candidates are free to choose the degree program they wish to follow and may change from one to the other; however, they may not obtain both degrees in the same Major subject.

### 4. The Minor Program

A candidate shall complete an approved concentration of courses to be known as the Minor program, consisting of at least 24 credit hours taken in a subject other than that of the Major chosen either from Clause 3.a. above or from the Minor programs listed below.

- a. A candidate must follow the regulations for the Minor program as set forth in the appropriate section of the Calendar.
- b. The Head of the Department or Program Supervisor of the Minor program will advise the candidate on the selection of courses in the Minor.
- c. A candidate who has completed courses in the area of the Minor at another university is required to complete at least 6 credit hours in that subject at this University.
- d. A Minor program in Business Administration is available to candidates for the Bachelor of Arts degree. This program is governed by regulations which are detailed under the Calendar entry for the Faculty of Business Administration.
- e. A Minor in Music History is available to students who meet the prerequisites for Music 1107 and 1127. This program is governed by regulations which are detailed under the Calendar entry for the School of Music.
- f. A Minor in Music and Culture is available in the School of Music. This program is governed by regulations which are detailed under the Calendar entry for the School of Music.
- g. Minor programs are available in the Faculty of Science. These programs are governed by regulations which are detailed under the Faculty of Science Calendar entries for each department.
- h. Up to 12 credit hours in courses offered by a single department as part of a multidisciplinary program may be used to satisfy the

requirements for the Minor, provided they are in accordance with the regulations governing that Minor.

- i. Multidisciplinary Minor programs are available in Aboriginal Studies, European Studies, Law and Society, Medieval Studies, Newfoundland Studies, Russian Studies, and Women's Studies. In addition, a Sociology/Anthropology Interdepartmental Minor program is available. These programs are governed by regulations which are detailed under the Calendar entries for Aboriginal Studies, European Studies, Law and Society, Medieval Studies, Newfoundland Studies, Russian Studies, Sociology/Anthropology, and Women's Studies.
- j. As an alternative to a Minor, a candidate may complete a second Major program and must follow all General and Departmental or Program Regulations for this Major program.

Note: *Departmental regulations are not intended to debar students from completing more than the minimum required credit hours in the subjects of their Major and Minor.*

## 5. Electives

In accordance with Regulations 2., 3. and 4. above, candidates must complete a minimum of 78 credit hours in courses offered by departments within the Faculty of Arts. Courses in Computer Science, Mathematics and Statistics, and Psychology may be applied to this requirement.

The remaining 42 credit hours (for a total of 120 credit hours required for the degree) will be electives; these may be chosen from offerings in Arts, Science, Business and Music (History and Theory only). Candidates may include as open electives up to 15 of these 42 credit hours in any subject area, with the exception of courses which are clearly practical or professional:

- a. Outdoor Pursuits or Expeditions in Environmental Studies
- b. Internships, Student Teaching or Practicum in Education
- c. Activity and Coaching courses in Human Kinetics and Recreation
- d. Applied Music or Ensemble Techniques in Music
- e. Nursing Practice or Clinical Practicum in Nursing
- f. Clinical Clerkship in Pharmacy
- g. Field Placements in Social Work
- h. Master Classes in Fine Arts (Theatre)
- i. Studio Courses in Fine Arts (Visual)

## 2.2 Admission to Programs in the Faculty of Arts

Note: *These regulations shall also apply to multidisciplinary and interdepartmental programs. In such cases, the student should contact the program coordinator or supervisor.*

Declaration of the Bachelor of Arts as a degree program may be made at the time of application to the University or by means of the Change of Academic Program Form following admission to the University.

Students who intend to complete a degree in the Faculty of Arts must also declare their Major and their Minor (or second Major) chosen according to Regulations 3. and 4. above. This declaration may be made at the time of application to the University or, following admission to the University, by means of the Change of Academic Program Form, which must be signed by the appropriate Head of Department or Program Coordinator or Supervisor and submitted to the Office of the Registrar.

Students are advised to declare their Major and their Minor (or second Major) no later than the semester in which they next attend the University following the completion of 18 credit hours.

Students are strongly advised to consult with departments or program coordinators or supervisors before making a declaration to the department or program of their intended Major or Minor.

In the case of programs with authorized admission requirements which go beyond the general admission requirements of the University, students should make formal application to the department, coordinator or supervisor after completion of the program's admission requirements.

## 2.3 Graduation Requirements

In order to graduate with the General Degree of Bachelor of Arts, a candidate shall obtain:

1. An average of 60% or higher on the minimum number of courses prescribed for the Major program, excluding 1000-level courses, and
2. An average of 60% or higher on the minimum number of courses prescribed for the Minor program, excluding 1000-level courses, and
3. An average of 2.0 points or higher per credit hour on the courses in Arts disciplines as indicated in Clause 3.a. above.

Notes: 1. *In the context of this regulation, any student attaining a grade of 55% or less in any course beyond the 1000-level in the Major or Minor is required to seek the advice of the appropriate department(s) at the beginning of the next semester to ensure that adequate progress is being maintained.*

2. *The minimum number of courses prescribed shall be understood to include any specific courses prescribed in the regulations of any department but excluding any 1000-level courses listed.*

## 2.4 Regulations for the Honours Degree of Bachelor of Arts

A program is offered leading to the Honours Degree of Bachelor of Arts. An Honours degree requires, over and above the requirements of the General degree, a concentration at an advanced level in an approved field, consisting of a subject or subjects of specialization and/or related subjects, and a high quality of work throughout the program. An Honours degree is of distinct advantage to candidates who plan advanced work or careers in their chosen fields and also to those who have a clear commitment to some special field of study. An Honours degree with first or second class standing is, in many cases, a prerequisite for admission to a graduate program.

Students completing a degree program in the Faculty of Arts will normally follow the degree regulations in effect in the academic year in which they first entered Memorial University of Newfoundland. This is determined by the year of the student number. However, students may elect to follow subsequent regulations introduced during their tenure in the program.

### 1. Admission and Registration

- a. Admission to Honours programs is competitive and limited, depending upon available resources. Candidates should consult the criteria established for the program in question. To be considered for admission to an Honours program, a candidate shall submit an "Application for Admission to the Honours Program" form to the Registrar. The application must be approved by the Head of the Department or Program Supervisor of the Subject of Specialization before the candidate can be admitted to the

program.

Note: A candidate who wishes to enter an Honours program is strongly advised to consult the Head of the Department or Program Supervisor at the earliest possible date, as it may not be possible to complete the requirements for the degree in the normal time if the decision to embark on the program is delayed beyond the end of the second year.

- b. Students who have been awarded the General Degree of Bachelor of Arts may convert it to an Honours Degree of Bachelor of Arts by applying to the department of specialization and the Registrar and, upon approval of such application by the Department, completing the requirements for the Honours degree as set forth in the regulations.
- c. Upon entering the program, the candidate shall be assigned a Faculty Advisor by the Head of the Department or Program Supervisor. The Faculty Advisor will be responsible for advising the candidate and the Head of the Department or Program Supervisor with respect to the candidate's program of studies.

## 2. Subjects of Specialization

Subjects which may be chosen as Subjects of Specialization for the Honours Degree of Bachelor of Arts are the following:

- a. Those administered by Departments through the Head of the Department: Anthropology, Classics, Computer Science, Economics, English Language and Literature, Folklore, French, Geography, German, History, Linguistics, Mathematics, Philosophy, Political Science, Psychology, Religious Studies, Sociology, Spanish (at present, only for Joint Honours).
- b. Those which, because of their interdepartmental character, are administered by two or more Departments through a Program Supervisor: see Sociology/Anthropology Interdepartmental Studies Program. (No other programs yet approved.)
- c. Joint Honours Programs: A candidate may undertake a program of Joint Honours in two Subjects of Specialization (see Regulation 3. c. ii.).

## 3. Course Requirements

Candidates for the Honours Degree of Bachelor of Arts shall complete a program of studies which shall consist of not fewer than 120 credit hours subject to the following regulations:

- a. All candidates are required to complete the Core Requirements as detailed in the Regulations for the General Degree of Bachelor of Arts. These include:
  - i. English Requirement
  - ii. Second Language Requirement
  - iii. Numeracy/Science Requirement
  - iv. Humanities Requirement
  - v. Social Science Requirement
  - vi. Research/Writing Requirement
- b. All candidates must also

- i. Pass a general comprehensive examination in a Subject of Specialization. This examination may be written, or oral, or a combination of both. The comprehensive examination shall count as 3 credit hours in the Subject of Specialization; AND/OR
- ii. Submit an Honours essay on an approved topic which, at the discretion of the Head of the Department or the Program Supervisor, may be followed by an oral examination thereon. Normally, the Honours essay will count as 3 credit hours in the Subject of Specialization, or as 6 credit hours in the case of linked (A/B) honours essays (please consult departmental regulations).

A copy of the Honours essay must be submitted to the University Library upon completion. All Honours essays in the University Library shall be available for unrestricted consultation by students and faculty except under very exceptional circumstances which must be approved by the Committee on Undergraduate Studies. Copyright remains with the author. A signed release form must accompany an essay or dissertation when it is submitted to the University Library.

Note: The semester in which the candidate sits for the comprehensive examination, and/or the semester in which the Honours essay is to be submitted, may be decided by the candidate after consultation with the Head of the Department or Program Supervisor.

- c. Further courses shall be chosen either
  - i. In consultation with the Faculty Advisor and with the approval of the Head of the Department or Program Supervisor of the Subject of Specialization, but in such a way that the candidate's program shall include not fewer than 60 credit hours in courses applicable to the Subject of Specialization, including the comprehensive examination and/or the Honours essay, at least 36 of which must be at the 3000 level or above, and not fewer than 24 credit hours in a Minor subject or program according to the Departmental or Program Regulations covering that Minor, and the total number of credit hours which may be applied to the degree is not fewer than 120;
 

or
  - ii. In consultation with the Faculty Advisors and with the approval of the Head of the Department or Program Supervisor of the Subject of Specialization, but in such a way that the candidate's program shall include not fewer than 60 credit hours in courses applicable to the Subject of Specialization, including the comprehensive examination and/or the Honours essay, at least 36 of which must be at the 3000 level or above, and not fewer than 36 credit hours in a Major subject or program according to the Departmental or Program Regulations governing that Major, and the total number of credit hours which may be applied to the degree is not fewer than 120.
  - iii. In consultation with the Faculty Advisors and with the approval of the Heads of the Departments or Program Supervisors of two Subjects of Specialization (Joint Honours), but in such a way that the candidate's program shall include not fewer than 42 and not more than 51 credit hours in courses approved for each of the Subjects of Specialization, including the comprehensive examination and/or the Honours essay, of which at least 27 shall be at the 3000 level or above in each of the Subjects of Specialization, and the total number of credit hours which may be applied to the degree is not fewer than 120.
  - iv. In the case of Joint Honours, the candidate may choose the Subject of Specialization for the Honours essay and/or comprehensive examination.
  - v. Other courses to make up the total of 120 credit hours may be chosen from any subjects listed under 2.a. with Canadian, Medieval, Russian and Women's Studies added to the list of subjects and from courses listed under and in accordance with Regulations for the General Degree of Bachelor of Arts, Clause 5. Electives.

## 4. Departmental Regulations

Candidates for Honours degrees shall also comply with such additional requirements of the appropriate Department(s) as are approved by the Senate and printed in the Calendar.

**5. Academic Standing**

In order to graduate with an Honours degree, a candidate shall obtain

- a. A grade of 70% or better, OR an average of 75% or higher in the minimum number of courses [including the required courses in the Honours subject(s) prescribed by the Department [or, in the case of Joint Honours, Departments] concerned, excluding 1000-level courses. A grade of 70% or better must be obtained in the Honours essay and/or comprehensive examinations.

AND

- b. An average of at least 2.75 points on the total number of credit hours in the courses required for the degree. (See **General Academic Regulations (Undergraduate), Classification of General Degrees.**)

Note: *Students who wish to fulfill the requirements of Clause 5. a. above using repeated or substituted courses must obtain approval of the Head of the Department and the Committee on Undergraduate Studies. The Honours essay and/or comprehensive examinations may not be repeated or substituted.*

**6. Classification of Degrees**

- a. If a candidate's general average is 3.25 points or better per credit hour in required courses and his/her average is 3.5 points or better per credit hour in the courses in the Honours subject (excluding 1000-level courses), the candidate shall be awarded an Honours degree with First Class standing.
- b. If a candidate fulfils the conditions of Regulation 5. above but not of Regulation 6. a., the candidate shall be awarded an Honours degree with Second Class standing.
- c. No classification will be given to the degree awarded a candidate who has completed (i) fewer than one half of the courses required for the degree at this University, or (ii) who has completed fewer than one half of the courses required for the degree at this University since 1959. All candidates for such degrees shall, however, fulfil the condition of clause 5. on the courses taken at this University since September 1959 in order to qualify for the degree.
- d. A declared candidate for an Honours degree who fails to attain the academic standing specified in clause 5. above, but fulfils the academic requirements for a General degree shall be awarded a General degree, the classification of which shall be determined in accordance with **General Academic Regulations (Undergraduate), Classification of General Degrees.**

**2.5 Regulations Governing Co-operative Education Program**

See Department of Economics

**2.6 Joint Degrees of Bachelor of Arts and Bachelor of Commerce (Co-operative)**

Students registered in a program leading to the degree of Bachelor of Arts who are concurrently completing the Bachelor of Commerce (Co-operative) degree\* will not be required to comply with clauses 2. d. and 2. e. of the Core Requirements for the General Degree of Bachelor of Arts. This adjustment of the core requirements will be permitted only for students who are graduating with the Bachelor of Arts degree and the Bachelor of Commerce (Co-operative) degree at the same convocation. In order to meet all of the requirements of both degree programs at the same time, students who are completing the joint degrees are strongly advised to follow the Suggested Program of Studies outlined below, to take account of the accompanying advisory notes, and to seek advice from the department or program of their Major in order to ensure that their proposed program is possible within the constraints of course scheduling and prerequisites.

\*See **General Academic Regulations (Undergraduate)**, Residence Requirements, Second Degree.

**Suggested Program of Studies: Bachelor of Arts and Bachelor of Commerce (Co-operative) Prior to admission to the Bachelor of Commerce (Co-operative) program**

For the joint degrees of Bachelor of Arts and Bachelor of Commerce (Co-operative), students must successfully complete a minimum of 150 credit hours in courses applicable to the degrees. To be eligible for admission to Term 1 of the Bachelor of Commerce (Co-operative) program, an applicant must have successfully completed 30 credit hours with an overall average of at least 65% on the courses comprising those credit hours. The 30 credit hours must comprise:

1. Six credit hours in English courses\*;
2. Either Mathematics 1090 and 1000 or Mathematics 1000 and 3 credit hours in a second language or in the subject of the intended Major program;
3. Economics 2010 and 2020;
4. Business 1000;
5. Nine additional credit hours in non-Business courses. It is strongly recommended that these 9 credit hours include courses in a second language\*\* and courses in the subject of the intended Major program.

\*It is strongly recommended that students complete English 1110 as one of these English courses.

\*\*The Bachelor of Arts degree requires 6 credit hours in the same second language.

Following admission to the Bachelor of Commerce (Co-operative) program, the curriculum is as set out in the **Bachelor of Commerce (Co-operative) Curriculum (Completed Jointly With The Degree of Bachelor of Arts)** Table.

Please refer to the calendar entry for the Faculty of Business Administration for complete course descriptions and regulations for the Bachelor of Commerce (Co-operative) degree.

**Bachelor of Commerce (Co-operative) Curriculum (Completed Jointly With The Degree of Bachelor of Arts) Table**

Term One (Fall)	Business 1101 Business 1201 Statistics 2500  Nine credit hours chosen from: Six credit hours in Major, Core or elective courses [see Note 1 below] Business 1600 Business 2000 Business 2401 Computer Science 2801
Term Two (Winter)	Business 2101 Business 2201 Business 2301  Remaining 9 credit hours chosen from: Business 1600 Business 2000 Business 2401 Computer Science 2801 Six credit hours in Major, Core or elective courses [see Note 1 below]
Spring	[see Note 2 below]
Term Three (Fall)	Business 3320 Business 3401 Business 3700 At least 6 credit hours in Major, Core or elective courses [see Note 1 below]
Work Term 1 (Winter)	Business 399W [see Note 2 below]
Term Four (Spring)	Business 4000 Business 4320 Business 4401 Business 4500 Economics 3150
Work Term II (Fall)	Business 499W [see Note 2 below]
Term Five (Winter)	Business 5301 At least 12 credit hours in Major, Core or elective courses [see Note 3 below]
Work Term III (Spring)	Business 599W [see Note 2 below]
Term Six (Fall)	Business 7000 At least 12 credit hours in Major, Core or elective courses [see Note 3 below]
Term Seven (Winter)	At least 15 credit hours in Major, Core or elective courses [see Note 3 below]

- Notes: 1. The degree of Bachelor of Arts requires completion of a Major program, a Minor program, a set of Core Requirements, and elective courses, totaling at least 78 credit hours in courses offered by departments within the Faculty of Arts (or Computer Science, Mathematics and Statistics, and Psychology). When the degree of Bachelor of Arts is completed jointly with the degree of Bachelor of Commerce (Co-operative):
- Minor program requirements are satisfied by Business courses specified in the **Bachelor of Commerce (Co-operative) Curriculum (Completed Jointly With The Degree of Bachelor of Arts) Table** above.
  - Core requirements for English and Numeracy/Science are satisfied by courses completed for admission to Term 1 or during Terms 1 or 2 of the Bachelor of Commerce (Co-operative) degree.
  - It is recommended that the Core Requirement for 6 credit hours in courses in a second language be completed prior to admission to the Bachelor of Commerce (Co-operative) degree program.
  - Core requirements for 6 credit hours in research/writing courses may be satisfied by including two such courses within the 78 credit hours in courses offered by departments within the Faculty of Arts. Please consult the Undergraduate Registration Procedures booklet to determine research/writing course offerings in any given semester.
  - Major requirements for the degree of Bachelor of Arts may be satisfied in 36 to 45 credit hours, depending on the department or program chosen. Students are strongly recommended to seek advice from the department or program of their Major to ensure that their proposed degree program is possible within the constraints of course scheduling and prerequisites.
2. Students are advised that, in order to complete the joint degrees within the minimum 150 credit hours, they should be prepared to complete at least three of the courses required for the degree of Bachelor of Arts as opportunities arise and as courses are offered. Following Term 2 of the program for the Bachelor of Commerce (Co-operative) degree, these courses may be completed during the Spring semester between Terms 2 and 3, or during any of the three Work Terms (for example, in the evening or by distance), or as sixth courses during any of Terms 3, 4, 5, 6 or 7 (following submission of a course-load waiver).
3. To meet the requirements for the degree of Bachelor of Commerce (Co-operative), not fewer than 15 and not more than 30 credit hours in elective courses must be chosen from Business courses (including non-Business courses prescribed for a concentration). Students intending to complete the joint degrees in the minimum number of 150 credit hours should ensure that at least 78 of these credit hours are completed in courses offered by departments within the Faculty of Arts (or Psychology, Mathematics and Statistics, and Computer Science). Careful planning, particularly in the selection of elective courses as well as in the sequence of Major program courses, is therefore recommended to ensure timely completion of the joint degrees.

### 3 Diploma Programs Offered in the Faculty of Arts

#### 3.1 Objectives

Diploma programs are of distinct advantage to candidates who wish to complement their studies in one or more fields of specialization with a program that will help them relate their knowledge to growing sectors of the economy and to areas of increasing social concern. These programs assume and build upon the theoretical knowledge acquired in the completion of an undergraduate degree and will assist in easing the transition of graduates to the workplace.

### 3.2 Components

Courses satisfying the Honours, Major, Minor and elective components of an undergraduate degree may also be used to satisfy the requirements of a diploma program; however, students are required to complete at least 6 credit hours beyond the minimum number required for that degree.

Diploma programs consist of between 24 and 36 credit hours in courses as specified in individual programs, including a field component of 6 credit hours in an approved instructional field placement and/or instructional field courses.

The purpose of the field component of the program is to provide students with an opportunity for practical and instructional field-oriented experiences as a means of broadening and reinforcing the other courses taken in the diploma program. The instructional field component may take a number of forms, depending on the nature of individual programs. Without limiting the generality of the definition, the instructional field component typically includes observation of and instruction in practical techniques and methods and their application, as well as the maintenance and submission of documentation and reports appropriate to the area of study.

Instructional field placements and instructional field courses may not normally be repeated.

### 3.3 Admission to Diploma Programs

Students seeking information about specific diploma programs should contact the diploma program coordinator, the Office of the Dean of Arts, or the Office of the Registrar.

1. Admission to all diploma programs is competitive and limited, depending upon available resources. For additional requirements stipulated by individual diploma programs, see the appropriate Calendar entry below.
2. Applicants for admission to diploma programs must normally either be registered in a Bachelor of Arts (Honours or General) program, or hold that degree from Memorial University of Newfoundland or another recognized university. An undergraduate degree other than the Bachelor of Arts may be acceptable for admission to some diploma programs (see specific program regulations below).
3. Applicants for admission to diploma programs must apply by completing the appropriate form available from the Office of the Registrar.

### 3.4 Graduation Requirements

1. The diploma will be awarded only in conjunction with or following the award of an appropriate undergraduate degree from Memorial University of Newfoundland or another recognized university.
2. To be eligible for the award of a diploma, a student must have obtained an overall average of 60% or higher in the courses prescribed for that program.
3. A minimum of 9 credit hours in courses prescribed for the diploma program must be completed at this University.

### 3.5 Diploma in Applied Ethics

Program Coordinator: Dr. N. Oman, Department of Philosophy.

The Diploma in Applied Ethics is offered to students who are either currently enrolled in the Bachelor of Arts or Bachelor of Science programs or have completed such degrees at this or another recognized university.

The Diploma helps to prepare students for the ethical challenges of various professions and for work as ethical consultants and analysts in government and private institutions (e.g., hospitals, businesses, environmental agencies).

#### 3.5.1 Admission Requirements

Admission to the Diploma program is limited and competitive. Applicants with a B.A. or B.Sc. in hand and senior undergraduates will be preferred. Experience working in the health care or environmental sectors is an asset. Students interested in applying to the program should contact the Program Coordinator. Formal application is made through the Office of the Registrar.

#### 3.5.2 Program of Study

The Diploma consists of 24 credit hours, including an Instructional Field Placement. A concentration in either bioethics, mental health ethics, or environmental ethics is required: courses toward a concentration must be chosen with the approval of the Program Coordinator.

#### 3.5.3 Course List

Philosophy 2230

Philosophy 2802 or Philosophy 2803 or Philosophy 2809

One advanced (3000 or 4000 level) course in ethics or philosophy of law, approved by the Coordinator

Philosophy 4900 or 4300-4310

Philosophy 5000

Two additional, elective courses, approved by the Coordinator.

### 3.6 Diploma in Creative Writing

Program Coordinator: Dr. L. Mathews, Department of English Language and Literature

#### 3.6.1 Program Description

The Diploma aims to develop students' skills in writing in a variety of genres conventionally described as "creative," such as fiction, poetry, drama, and creative non-fiction. It will also offer students the opportunity to take, as options, courses that provide a background in contemporary literature in these genres.

The eight course, 24 credit hour program will comprise at least five and as many as eight creative writing courses in at least three and as many as four genres. The overall aim of the program is to help students produce work that merits publication. To this end, the focus of the creative writing courses will be on the composition, critiquing, and editing of the students' own work, and, in both the creative writing and contemporary literature courses, on analyzing examples of excellent contemporary writing.

### 3.6.2 Admission Requirements

As has traditionally been the case, students will compete for admission to individual Creative Writing courses via the portfolio system. The Diploma will be earned by accretion.

### 3.6.3 Program of Study

Students are required to complete a minimum of 24 credit hours of course work, including at least 15 credit hours from the following: English 3900, English 3901, English 3902, English 3903, English 4910, English 4911, English 4912, and English 4913

The remaining courses must be taken from:

1. additional courses from the above list
2. one or more special topics courses in Creative Writing (English 4920-4930)
3. one or more of English 3100, 3155, 3156, 3158, 3160, 3161, 3171, 3172, 3173, 4080, 4270, 4302, 4822
4. one or more courses from the Diploma in Professional Writing

## 3.7 Diploma in English as a Second Language

Program Coordinator: J. Bengler, Department of English Language and Literature

The Diploma Program in English as a Second Language is offered to students enrolled in the Bachelor of Arts program and to students who have completed a Bachelor of Arts (Honours or General) at this or another recognized university.

This program prepares students for positions in private language schools and community colleges in Canada and overseas, working primarily with adults whose first language is not English. The Diploma combines expertise from the Department of English Language and Literature, the Department of Linguistics, and the Faculty of Education. The required courses provide a solid understanding of the characteristics and needs of adult ESL learners.

### 3.7.1 Admission Requirements

Admission to the Diploma Program in ESL is limited and competitive. A high level of English language proficiency is required. Students are advised to notify the program coordinator of their intention to apply for admission into this program. Formal application is made through the Office of the Registrar, normally in the second semester of the student's second year of study.

### 3.7.2 Program of Study

Students are required to complete a minimum of 27 credit hours of course work, including: 15 credit hours in language courses in English and/or Linguistics, 6 credit hours of Education studies, 6 credit hours of instructional field placement (Practicum). This practicum will acquaint students through observation and practice with Teaching English as a Second Language to adult learners.

### 3.7.3 Course List

Education 2222  
 Education 4950  
 English 2390  
 English 3650  
 English 5100  
 English/Linguistics 3105  
 Linguistics 2104  
 Linguistics 3155

## 3.8 Diploma in Geographic Information Sciences

Program Coordinator: Dr. É.L. Simms, Department of Geography

The diploma program is offered by the Department of Geography to students registered in a Bachelor program (General or Honours) at Memorial University of Newfoundland. The diploma program is also offered to students who have completed a Bachelor's program at Memorial University of Newfoundland or another recognized university. The Diploma in Geographic Information Sciences is of interest to students from a broad range of backgrounds. It is a valuable complement to social and natural sciences programs such as anthropology, biology, computer sciences, earth sciences, history, economics, engineering, health and medicine, physical oceanography, environmental sciences and environmental studies. The fields of remote sensing, geographic information systems (GIS) and cartography provide the most effective methods of gathering, managing, analyzing and representing geographic information. Remote sensing images provide a resourceful information to observe and study the cultural and physical landscapes. Examples of remote sensing applications include the monitoring of spatial changes, environmental quality evaluation, natural resources exploration, assessment and monitoring, and archaeological site assessment. Geographic information systems enables the compilation, organization and processing of spatial (maps) and non-spatial (text, statistics, graphs) data. Socio-economic, political and environmental management decision-making is supported by the results of GIS analyses and modelling. Cartography involves the compilation, organization and visual representation of spatial information. A variety of geographical information can effectively be communicated through cartography.

### 3.8.1 Admission Requirements

Admission to the Diploma in Geographical Information Sciences is limited and competitive. Students are advised to notify the program coordinator of their intention to apply for admission into this program. Students who wish to enter this program must apply through the Office of the Registrar by April 1 for Fall semester registration and by October 15 for Winter semester registration.

To be considered for admission to the Diploma in Geographic Information Sciences, students will normally have completed 24 credit hours, including the courses listed in 1., 2., and 3., with an overall average of at least 65%.

1. Geography 1050 or one 1000-level course in applicant's Bachelor's Major program.
2. Mathematics 1000 or equivalent.
3. Two 1000- or 2000-level core courses in student's Bachelor's Major program, excluding the courses listed in 1. and 2. above.

Students who fulfill the eligibility requirements compete for a limited number of available spaces. Selection is based on academic performance.

### 3.8.2 Continuation Requirements

To be considered for the field placement courses Geography 4290 and 4919, the candidates for the Diploma in Geographic Information Sciences will normally have completed at least seven courses required for the program, with an overall average of 65%.

### 3.8.3 Program of Study

Students are required to complete a minimum of 30 credit hours of courses as listed below.

Note: *The course Mathematics 2050 is a prerequisite to some of the fourth year courses required for the diploma.*

### 3.8.4 Course List

Computer Science 1710  
 Geography 2195  
 Geography 3202  
 Geography 3250  
 Geography 3260  
 Geography 4202  
 Geography 4250  
 Geography 4261  
 Geography 4290  
 Geography 4919

## 3.9 Diploma in Heritage Resources

Program Coordinator: Dr. G. Pocius, Department of Folklore

The Diploma in Heritage Resources is offered to students enrolled in the Bachelor of Arts or other appropriate Bachelor's program and to students who have completed a Bachelor's degree at this or another university.

Building on the student's academic grounding in anthropology/archaeology, folklore, history, geography, and other relevant disciplines, the program offers training in object documentation, identification, conservation, and display. Required courses give students both an awareness of the broad range of heritage resources - including objects, sites, landscapes, documents - and specific skills to deal with public perceptions of objects and artifacts. The program also includes a course in tourism management. Elective courses enable students to pursue their particular disciplinary interests.

The Diploma in Heritage Resources helps prepare students to work in the expanding heritage sector in Newfoundland or elsewhere. Students with this diploma will be better able to compete for positions in museums and historic sites and for employment with heritage consultants, and to participate in contracts involving heritage policy and planning, all part of the increasing regional and global importance of cultural tourism. The diploma in Heritage Resources will also be an advantage to students wishing to study heritage or cultural resources management at the graduate level.

This diploma program draws on the expertise of the Archaeology Unit, the Centre for Material Culture Studies, and individual faculty members in various departments and faculties.

### 3.9.1 Admission Requirements

Admission to the Diploma in Heritage Resources program is limited and competitive. Students are advised to notify the Program Coordinator of their intention to apply for admission into this diploma program. Formal application is made through the Office of the Registrar, normally in the second semester of the student's second year of study.

### 3.9.2 Program of Study

Students are required to complete a minimum of 30 credit hours of course work, including 6 credit hours in instructional field courses, from the lists of required and elective courses below, with:

1. at least 15 credit hours from the 'Required Courses' listed below, which must include 3 credit hours in a field course in Cultural Resources Management and at least 12 credit hours chosen from Material Culture, Archaeological Conservation, Collections Management, Introduction to Museums & Historic Sites and Tourism Management.
2. at least 12 credit hours from the 'Elective Courses' listed below, chosen to include at least 3 credit hours in a course designated as an instructional field course. Instructional field-oriented courses will deal with a wide array of artifact-related research in historic sites/museums. These instructional field courses will be advertised by the Program Coordinator.

### 3.9.3 Course List

#### Required Courses

Anthropology 3587  
 Anthropology/Folklore 3591  
 Business 6020  
 Folklore 3700/Anthropology 3710  
 Folklore/Anthropology 3850  
 Geography/Anthropology/Folklore 4015\*

#### Elective Courses

Anthropology 3290  
 Anthropology 3582  
 Anthropology 3584  
 Anthropology 3585-3586\*  
 Folklore/MST 3001/Anthropology 3589/History 3020  
 Folklore 3601\* (Harlow Campus)  
 Folklore 3608\*/Geography 3900\* (Harlow Campus)  
 Folklore 3613\* (Harlow Campus)  
 Folklore/Anthropology 3800  
 Folklore/Anthropology/History 3860  
 Folklore 3900\*  
 Folklore 4601\*



Folklore/History 4480  
 Geography 2001  
 Geography 3610  
 Geography 3990\* (Harlow Campus)  
 History 3110  
 History 3870  
 History/Folklore 4100  
 (\* indicates an instructional field course)

### 3.10 Diploma in Performance and Communications Media

Program Coordinator: Dr. D. Lynde, Department of English Language and Literature

Memorial University of Newfoundland offers a specialized Diploma Program in Performance and Communications Media. This Diploma draws on the expertise of the Drama Specialization, Department of English, Distant Education and Learning Technologies (DELT), and CBC Television. Students receive an introduction to multi-media in the area of dramatic arts and video techniques. Students will be introduced to the wide applications of stage and video craft through a program of project-oriented courses. Required courses give students specific skills in stage and video craft and enable students to specialize in their own particular practical area of interest.

The Diploma in Performance and Communications Media prepares students to work in the cultural industries in Newfoundland (or other parts of North America). Students with this unique training are better able to work across existing media.

#### 3.10.1 Admissions

**Academic Requirements:** Applicants for the Diploma program must satisfy the general admission requirements of the University.

**Auditions:** In addition to meeting the general requirements of the University for admission to diploma programs, applicants for the Diploma in Performance and Communications Media must undergo an audition/interview to the satisfaction of the Program Coordinator. Enrolment in the Diploma in Performance and Communications Media is limited and competitive. Students are advised to notify the Program Coordinator in their first year if they intend to apply for this Diploma. Formal application normally takes place in the second semester of second year.

#### 3.10.2 Program of Study

1. Students must complete a minimum 18 credit hours of course work in the following required courses with an overall average in these courses of at least 65%: English 3350, English 3351, English 3816, English 4400, English 4401, and English 4402.
2. Students must also complete 6 credit hours in English 5000 - Instructional Field Placement. Admission to this instructional field placement course is by application to the Program Coordinator, normally at least three months before the beginning of the placement, and is limited to students who at the time of admission have completed the six courses listed above with an overall average of at least 65% and who already hold a first degree or are in their final year of a degree program as confirmed by the Office of the Registrar.

### 3.11 Diploma in Police Studies

Program Coordinator: A. Morris, Department of Sociology

The Diploma Program in Police Studies is offered to students who are recruit cadets of the Royal Newfoundland Constabulary currently enrolled in an undergraduate degree program or who hold an appropriate undergraduate degree from Memorial University of Newfoundland or another recognized university. The program provides recruit cadets with the academic and experiential learning components of a degree program relevant to their future work as police officers. The diploma is completed concurrently with a degree program or following the award of a first degree.

#### 3.11.1 Admission Requirements

Admission to the diploma program is limited and competitive. Applicants for the Diploma program must be recruit cadets in the Royal Newfoundland Constabulary who satisfy the general admission requirements of the University, and at the time of admission must have completed 6 credit hours in English, Psychology 1000 and 1001, and Sociology 2000.

#### 3.11.2 Program of Study

Following admission to the diploma program and until completion of all diploma program requirements, students must normally carry a course load of 15 credit hours in each of the Fall and Winter semesters. Students must complete a total of 36 credit hours in the following required courses:

#### 3.11.3 Course List

##### Required Courses

Political Science 3521  
 Political Science 3720  
 Psychology 2100 or Psychology 2120  
 Psychology 2800  
 Psychology 3640  
 Social Work 3310  
 Sociology 3290  
 Sociology 3306  
 Sociology 3395  
 Sociology 4212  
 Police Studies 5000

**5000 Instructional Field Placement in Police Studies (6 credit hours)** is a one-semester course, following completion of ten courses specified for the diploma program, designed to integrate knowledge acquired in coursework with the training curriculum provided by the Royal Newfoundland Constabulary to its recruit cadets. In consultation with the course instructor, students will prepare and submit a reflective report linking their observation of and instruction in the practical techniques and methods of police work with the broad range of knowledge acquired in other courses taken in the diploma program. Enrolment in this course is restricted to students admitted to the Diploma Program in Police Studies.

Prerequisites/Co-requisites: Completion of two semesters of course work in the Diploma Program in Police Studies.

In order to maintain the mandatory course load of 15 credit hours in each of the Fall and Winter semesters, students who have

previously completed one or more of the required courses will select courses from the alternate list below, or other appropriate courses as recommended by the Program Coordinator.

#### **Alternate Courses**

Sociology/Anthropology 2260  
 Anthropology 2414  
 Anthropology 2492  
 Sociology/Anthropology 3240  
 English 2160  
 Geography 2495  
 History 3813  
 History 3560  
 Law and Society 2000  
 Philosophy 2802  
 Philosophy 2810  
 Political Science 3791  
 Religious Studies 2610  
 Religious Studies 3650  
 Sociology 4095  
 Sociology 4210  
 Women's Studies 2000

### **3.12 Diploma in Professional Writing**

Program Coordinator: J. Guthrie, Department of English Language and Literature

#### **3.12.1 Program Description**

Students build on their studies in the Faculty of Arts through courses (18 credit hours) in: a) the critical analysis of nonfiction texts and b) the writing of nonfiction pieces in different genres. The program aims to give students: a broad understanding of context, readership, aim, genre, and style in nonfiction; skills in planning, drafting, revising, and editing their own work; the ability to edit the work of others in a collaborative way.

The 6 credit hour practicum will be served in professional situations, e.g., organizations, government, the media.

#### **3.12.2 Admission Requirements**

Admission to the program is limited. Applicants who have completed a Bachelor of Arts degree and senior undergraduates in the Faculty of Arts will normally be preferred. Applicants must demonstrate proficiency in writing by means of a portfolio submitted with the application. This may be a collection of work completed in English 2010, 2700, 3817, 3900, 3901, or another intensive writing course above the first-year level; or it may be a collection of work published in a student newspaper or carried out for a community organization. The portfolio must be accompanied by a statement from a professor or other competent authority attesting that the contents are the student's own work.

#### **3.12.3 Program of Study**

Students are required to complete a minimum of 24 credit hours of course work, including:

1. English 2020, English 3910, English 3920, English 3817, English 4914, and English 5200
2. one of English 3001, English 3900, English 3901, English 3902, English 3903, English 4910, English 4911, English 4912, or English 4913

Further information regarding the Diploma in Professional Writing may be obtained through the website at [www.mun.ca/english/diplomas/professional.php](http://www.mun.ca/english/diplomas/professional.php).

## **4 Waiver of Regulations for Undergraduate Students**

Regulations involving course prerequisites or corequisites, departmental regulations, and faculty regulations may be waived where circumstances so warrant. The routing of requests for such waivers and the procedure for appealing unfavourable decisions are outlined in the **UNIVERSITY REGULATIONS - General Academic Regulations (Undergraduate)**.

## **5 Harlow Campus Semester**

This is an integrated interdisciplinary Arts program offered each Fall semester at the Harlow Campus, England. The content of the program changes each Fall, depending upon the departments involved. Credits for the program equal 15 credit hours, with the allocation of credits to departments changing each Fall. Students wishing to enrol in a Harlow semester must have completed at least 48 credit hours at the university level, and satisfy any prerequisites which may be required. Enrolment is competitive. The relevant admission criteria, as well as other information, may be obtained from the Office of the Dean of Arts.

## **6 Programs, Regulations, and Course Descriptions**

### **6.1 Aboriginal Studies**

Program Co-ordinator: Dr. M. MacKenzie, Department of Linguistics

The Minor in Aboriginal Studies is a multi-disciplinary program offered to candidates for the degree of Bachelor of Arts. The Minor program is an alternative to a Minor offered by a single department and satisfies the degree requirement for a Minor.

#### **6.1.1 Regulations**

Students who minor in Aboriginal Studies shall complete a minimum of 24 credit hours including Anthropology 2414 (3 credit hours) plus one course in any three of the following disciplines: Education, English, History, Law and Society, Linguistics, Social Work, and Sociology (9 credit hours). The remaining 12 credit hours can be chosen from any of the courses in the program. Students enrolled in the Bachelor of Education (Native and Northern) Degree Programs must contact the Native and Northern Teacher Education Office for

information on which Education courses may be used for the Aboriginal Studies Minor.

## 6.1.2 Course List

### Anthropology

Social/Cultural 2414

Archaeology/Physical 2481, 3290, 3291, 3510

### Education

Education 2023, 2361, 3573, 4020

### English

English 2160

### History/Anthropology

History/Anthropology 3515, 3520, 3525

### History

History 2200, 4222

### Law and Society

Law and Society 3012

### Linguistics

Linguistics 1030, 1031, \*2020, \*2021, \*2025, \*2026, \*2030, \*2031, \*2040, \*2041, 2060, 4050-4054

### Social Work

Social Work \*3230, \*3511, \*3530, 5522, 5614

### Sociology/Anthropology

Sociology/Anthropology 2220, 3240, 4070

\* Courses marked with an asterisk \* are infrequently offered or offered only in Labrador.

Note: *The normal departmental prerequisites are applicable, but Department Heads may waive course prerequisites in cases where alternate preparation can be demonstrated.*

## 6.2 Anthropology

All students who major in Anthropology will be assisted by a faculty advisor who will help them in planning their academic programs. For this purpose, it is essential that students register with the Department at an early stage of their studies.

### 6.2.1 General Degree

#### 1. First Courses

Anthropology 1030 and 1031 or an equivalent course or courses are required of all students wishing to concentrate in anthropology.

The following courses, cross-listed with the Department of Sociology and identified by the prefix "S/A", are also taught at the introductory level: 2200, 2210, 2220, 2230, 2240, 2260, 2270, 2280 and 2350. These courses can be taken as first courses or may be taken following a departmental introductory course.

#### 2. Major Options

The Department of Anthropology offers undergraduate programs concentrating in a) Social and Cultural Anthropology; b) Archaeology and Physical Anthropology; and c) Interdisciplinary Studies in Sociology and Anthropology. Courses are designated as S/C, A/P, or S/A, according to which option they belong.

The student majoring in Anthropology must meet the requirements listed under General Degree Regulations, Regulations for the General Degree of Bachelor of Arts. Under these regulations, 36 credit hours in Anthropology are required. Specific regulations for each option follow:

- a. **Social/Cultural Anthropology.** Students wishing to concentrate in this option must take A/P 1030 and S/C 1031; 6 credit hours in courses at the 2000 level chosen from S/C 2410, S/C 2411, S/C 2412, S/C 2413; 6 credit hours from S/C 4000-level offerings, of which one must be S/C 4410 or S/C 4412; the remaining 18 credit hours are to be chosen from any of the S/C or S/A 3000- or 4000- level offerings. Students should note that the completion of S/C 1031 and one 2000-level S/C course is a prerequisite for all S/C 3000-level courses, and that two S/C courses at the 2000 level or above are prerequisites for all S/C 4000-level courses.
- b. **Archaeology/Physical Anthropology.** Students wishing to concentrate in this option must take A/P 1030 and S/C 1031, Anthropology 2430 and 2480; 12 credit hours in Archaeology or Physical Anthropology courses at the 3000 level; 9 credit hours in Archaeology or Physical Anthropology courses at the 4000 level which must include Anthropology 4182 (History of Archaeology) and 4411 (Theory and Method in Archaeology and Prehistory); 6 additional credit hours in Archaeology and Physical Anthropology courses at the 3000 or 4000 level. Students are encouraged to take appropriate course offerings in Social and Cultural Anthropology. Students should note that Anthropology 2430 is a prerequisite for all 3000- and 4000-level courses in Physical Anthropology and that Anthropology 2480 is a prerequisite for all 3000- and 4000-level Archaeology courses.
- c. **Interdisciplinary (S/A) option.** Students wishing to concentrate in this option must take at least 24 credit hours in S/A courses, plus a minimum of 12 credit hours in courses selected from the offerings of the Anthropology Department or the Sociology Department or both. Specific requirements are detailed under the Sociology/Anthropology Interdepartmental Studies Program.

#### 3. Minor Options

A Minor in Anthropology may be achieved by completing any one of three sets of courses:

- a. **Social and Cultural Anthropology:** 1030, 1031; 6 credit hours in courses at the 2000 level chosen from 2410, 2411, 2412, 2413; and 12 credit hours chosen from Department offerings at the 3000 level or above, including at least 3 credit hours in a course at the 4000 level.
- b. **Archaeology and Physical Anthropology:** 1030, 1031; 2430 and 2480; 3 credit hours in an Archaeology/Physical Anthropology course at the 4000 level; and 12 credit hours in other Anthropology courses, at least 9 credit hours of which shall be from among Archaeology/Physical Anthropology offerings.
- c. **Sociology/Anthropology ("S/A"):** see the regulations listed under the Sociology/Anthropology Interdepartmental Studies Program.

Students majoring in either Anthropology or Sociology cannot elect to Minor in the S/A Program. Likewise, S/A Majors cannot elect either Anthropology or Sociology as a Minor.

## 6.2.2 Honours Degree

1. Admittance: As per existing regulations.
2. Students intending an Honours program are required to complete 60 credit hours following the requirements in 2. **Major Options** above, but in addition must include Anthropology 4995-Honours Essay, or 4996-Comprehensive Examination. Students must also meet requirements of General Regulations for Honours Degrees, and regulations for the Honours Degree of Bachelor of Arts.

## 6.2.3 Regulations for Joint Honours, Anthropology and Another Major Subject

1. Candidates must fulfil the requirements of the General Regulations for the Honours degree.
2. Candidates must complete:
  - a. Anthropology 1030 and 1031;
  - b. Six credit hours in Anthropology courses chosen from 2410, 2411, 2412, 2413, 2430 and 2480;
  - c. Fifteen credit hours in Anthropology courses at the 3000 level, chosen in consultation with a supervisor;
  - d. Fifteen credit hours in Anthropology courses at the 4000 level, with a grade of "B" or better. These must include Anthropology 4410 and one of 4000, 4411 and 4412.

## 6.2.4 Course List

In accordance with Senate's *Policy Regarding Inactive Courses*, the course descriptions for courses which have not been offered in the previous three academic years and which are not scheduled to be offered in the current academic year have been removed from the following listing. For information about any of these inactive courses, please contact the Head of the Department.

Note: *S/A course descriptions may be found in this Calendar under the Sociology/Anthropology Interdepartmental Studies Program.*

**1030 Introduction to Archaeology and Physical Anthropology (A/P)** is a broad overview of Archaeology and Physical Anthropology introducing the concepts of human biological and cultural evolution and the methods and techniques by which these are investigated. The course is designed to provide the basis for further study in the disciplines. Credit may not be obtained for both Anthropology 1030 and the former Anthropology 1000 or 2000.

**1031 Introduction to Social and Cultural Anthropology (S/C)** is a general introduction to Anthropology emphasizing different forms of society and culture. Cultures within and outside the Western tradition will be examined, ranging from small-scale to more complex pre-industrial societies. Credit may not be obtained for both Anthropology 1031 and the former Anthropology 1000 or 2000.

**2200 Communities (S/A)** (see Sociology/Anthropology Interdepartmental Studies Program)

**2210 Communication and Culture (S/A)** (see Sociology/Anthropology Interdepartmental Studies Program)

**2220 Labrador Society and Culture (S/A)** (see Sociology/Anthropology Interdepartmental Studies Program)

**2230 Newfoundland Society and Culture (S/A)** (same as Folklore 2350) (see Sociology/Anthropology Interdepartmental Studies Program)

**2240 Canadian Society and Culture (S/A)** (see Sociology/Anthropology Interdepartmental Studies Program)

**2260 War and Aggression (S/A)** (see Sociology/Anthropology Interdepartmental Studies Program)

**2270 Families (S/A)** (see Sociology/Anthropology Interdepartmental Studies Program)

**2280 The City (S/A)** (see Sociology/Anthropology Interdepartmental Studies Program)

**2300 Newfoundland Folklore (S/C)** (same as Folklore 2300)

**2350 Religious Institutions (S/A)** (see Sociology/Anthropology Interdepartmental Studies Program) Cross-listed with Religious Studies 2350

**2410 Classics in Social and Cultural Anthropology (S/C)** is an examination of selected milestone monographs, ground-breaking studies for interdisciplinary specialties, and major syntheses. This course qualifies as a Research/Writing course.

**2411 Anthropologists in the Field (S/C)** is based on the fact that anthropologists base many of their ideas on experiences they have while living in other cultures. This course examines the human relationships through which anthropologists explore cultures and how in turn these relationships affect the anthropologists and the development of their discipline.

**2412 Threatened Peoples (S/C)** is an examination of key social and cultural factors involved in the global extinction of small-scale societies; the intrusive influences that jeopardize small-scale societies, such as disease; economic and military incursion; the role of international non-governmental agencies in aid of threatened peoples; and the role of the anthropologist in this human crisis.

**2413 Modern World Cultures (S/C)** is an examination of significant studies of 20th century populations and their implications for understanding the human condition.

**2414 Regional Studies: North American Indians and Inuit (S/C)** is a survey course dealing with the various tribal and band societies of North America, with special emphasis on the northern portion. The student will be introduced to the cultural history and language distribution of the area along with an examination of the major regional divisions. Several societies will be studied in more detail as case studies in the ethnographic analysis of specific cultural situations. The course will also deal with the effect on these cultures, through the historic period, of European trade, conquest, and settlement, again with special emphasis on the Canadian region.  
Note: *Credit may not be obtained for S/C 2414 and the former S/C 3281.*

**2430 Physical Anthropology: The Human Animal (A/P)** investigates the human animal as we exist now and as we developed through time. Students will discover how the study of fossil remains, living and extinct primates, and the applications of the principles of genetics, adaptation and variation of human evolution help to provide an understanding of how biology and culture have interacted to produce modern humans.  
Prerequisite: A/P 1030.

**2480 Archaeology: Discovering our Past (A/P)** is an introduction to archaeological techniques, methodology and theory. Lectures cover the development of the discipline, techniques of survey and excavation, methods of analysis and the interpretation of prehistory.  
Prerequisite: A/P 1030.

**2481 Ancient Civilizations of the Americas** A survey course introducing the archaeology and ethnohistory of various pre-contact civilizations of North, Central and South America. Archeological Evidence will be used to explore the rise of civilizations in the Americas and particular civilizations will be examined and compared based on ideology, economy and administration.

Prerequisites/Co-requisites: Anthropology A/P 1030 - Introduction to Archaeology and Physical Anthropology.

**2490 Human Origins (A/P)** - inactive course.

**2491 Popular Archaeology (A/P)** - inactive course.

**2492 Forensic Anthropology (A/P)** is an examination of procedures and techniques used by physical anthropologists and archaeologists to obtain data pertinent to investigations by law enforcement and medical authorities: evidence concerning the identification of human remains and the cause, time and manner of death.

**2500 Folk Literature (S/C)** (same as Folklore 2500)

**3020 What is Human? (A/P)** - inactive course.

**3040 The Human Skeleton (A/P)** reflects genetic, environmental and cultural influence. This course, emphasizing identification of individual bones in the skeleton, techniques for obtaining size and shape differences in individual bones and the entire skeleton, estimation of group numbers and death rates, and diagnosis of disease and other abnormal conditions, provides a means of assessing all of these influences on past human populations.

**3050 Ecology and Culture (S/C)** is a survey of the basic principles and perspectives of human and cultural ecology and ecological anthropology. Emphasis will be placed on the evolutionary development of basic ecological adaptations: foraging, horticulture, pastoralism, agriculture and industrialism. Major ecosystems and human adaptive adjustments to them will also be surveyed, especially arctic, mountain, desert, grassland and tropical rainforest ecosystems.

**3052 Anthropology and Directed Social Change (S/C)** - inactive course.

**3053 Anthropology of Religion (S/C)** - inactive course.

**3054 Play and Culture (S/C)** is an examination of the phenomenon of play in a variety of human cultures, and in such forms of activity as religion, politics, festival, speech, performance, and artistic creation. Principal themes

are the functional role of play in social relations, and the meaningful role of play in social thought.

**3058 Urban Anthropology (S/C)** is an examination of anthropological studies of urban populations and population segments, such as ethnic groups and categories, occupations, neighborhoods, etc.

**3060 The Idea of Culture (S/C)** - inactive course.

**3061 Culture and Social Inequality (S/C)** examines the role of culture in mediating different forms of social inequality, exploring the idea that culture is not only a way of life but also a way of managing power between unequals, from individuals to social classes. Readings in the course concentrate on cultural techniques of social control.

**3062 Anthropology in Social Policy-making (S/C)** - inactive course.

**3063 Ethnicity and Culture (S/C)** - inactive course.

**3064 Anthropology and the Study of Social Problems (S/C)** - inactive course.

**3082 Bandits, Rebels, and Revolutions (S/C)** examines types of social conflict specific to different kinds of class-based society, including social banditry, primitive rebellions, and peasant revolutions. More generally, social conflict is used to explore the variety of ways that pre-industrial societies have been made part of the modern world economy.

**3083 Cultural Crises and the Environment (S/C)** is an examination of social and cultural aspects of dilemmas in the use of renewable and non-renewable resources such as animals, arable land, forests, fisheries, air, water, fossil fuel, and nuclear energy. Special attention to Third World and marginal populations.

**3100 Dominance and Power (S/A)** (see Sociology/Anthropology Interdepartmental Studies Program)

**3140 Social Movements (S/A)** (see Sociology/Anthropology Interdepartmental Studies Program)

**3210 Persistence and Change in Rural Society (S/A)** (see Sociology/Anthropology Interdepartmental Studies Program)

**3220 Work and Society (S/A)** (see Sociology/Anthropology Interdepartmental Studies Program)

**3240 Regional Studies: Contemporary Native Peoples of Canada (S/A)** (see Sociology/Anthropology Interdepartmental Studies Program)

**3241 Regional Studies: The Atlantic (S/A)** (see Sociology/Anthropology Interdepartmental Studies Program)

**3242 European Societies (S/A)** - inactive course.

**3249 Peoples of the Pacific (S/A)** - inactive course.

**3254-3257 Regional Studies (S/A)** (see Sociology/Anthropology Interdepartmental Studies Program)

**3260 Social and Economic Development (S/A)** (see Sociology/Anthropology Interdepartmental Studies Program)

**3280 Regional Studies: The Arctic (S/C)** is a courses on studies of cultural, ecologic, economic and social systems in the northern circumpolar regions.

**3290 Newfoundland and Labrador Prehistory (A/P)** is a seminar and reading course on the culture history of Newfoundland and Labrador from about 9,000 years ago until the time of European settlement. Particular attention will be paid to the interactions among the several ethnic and cultural groups upon whose history this course focusses.

**3291 Maritime Provinces Prehistory (A/P)** - inactive course.

**3305 The Anthropology of Gender (S/C)** aims to provide students with a comprehensive introduction to the major research questions that have been addressed by anthropologists concerned with the study of gender. A variety of empirical examples are used to demonstrate the variation in what it means to be 'female' or 'male' across disparate time periods and cultural contexts.

**3314 Gender and Society (S/A)** (see Sociology/Anthropology Interdepartmental Studies Program)

**3317 Oil and Society (S/A)** - inactive course.

**3318 Culture and Aging (S/A)** is an introduction to the study of aging from a social and cultural perspective. Distinctions between the biological and social elements of the aging process will be examined. The overview of social and cultural gerontology includes social, economic and political influences on later life, as well as the culture-based needs and aspirations of the aged.

**3320 Terrorism and Society (S/A)** (see Sociology/Anthropology Interdepartmental Studies Program)

**3330-3339 Interdisciplinary Specialties (S/A)** (see Sociology/Anthropology Interdepartmental Studies Program)

**3384-3389 Regional Studies in Anthropology (S/C)**

**3402-3409 Anthropological Specialties (S/C)** will have a topic of current interest and importance announced by the Department for each term. Prerequisites: Six credit hours in Anthropology.

**3500 Prehistory of Africa, Asia and Europe I (A/P)** examines the early stages of cultural evolution in the Old World. Topics include: earliest human origins in Africa; the dispersal of humans throughout the Old World; the appearance of modern-type humans during the last ice age.

**3505 Prehistory of Africa, Asia and Europe II (A/P)** is a survey of the more recent stages of human cultural evolution in the Old World. Topics include: complex behaviour of modern-type hunter-gatherers of the last ice age; the domestication of plants and animals in early farming communities. Prerequisites: A/P 2480 and A/P 3500.

**3510 Prehistory of the New World (A/P)** is a survey of cultural development in the Americas from the entry of humans until the time of European contact. Topics include: the earliest human migrations and the dispersal of human groups throughout the New World; the development of complex hunting-gathering societies; the origins of agriculture and sedentism.

**3515 Prehistory of Mesoamerica (A/P)** - inactive course.

**3520 The Early Ethnohistory of North America's Native People (A/P)** (same as History 3520) examines the North American native response to early European contact and initial settlement. Particular attention will be paid to cultural change resulting from the adoption of European goods, participation in the fur trade, the introduction of European disease, and the adaptation to a permanent European presence.

**3525 The Later Ethnohistory of North America's Native People (A/P)** (same as History 3525) examines Indian and Inuit cultural history of the 18th and 19th centuries, including the fur trade, resistance and accommodation to European expansion, the emergence of revitalization movements, demographic changes, and population shifts. Special emphasis will be placed on the ethnohistory of the native peoples of what is now Canada and northern United States.

**3561 Ethnoarchaeology (A/P)** - inactive course.

**3580 Bronze Age Archaeology of the Eastern Mediterranean (A/P)** - inactive course.

**3582 Historical Archaeology (A/P)** (same as History 3530) will introduce students to historical archaeology, with special reference to the North Atlantic, 1000 to 1900 AD. The archaeology of specific historic sites, including Newfoundland sites, will be examined in order to raise theoretical issues and to give practical examples of methodology. Students will be introduced to the methodological challenges of palaeography, analysis of historic maps, survey, excavation and analysis of complex sites, underwater archaeology, documentary archaeology, material culture and subsistence studies, interpretation, conservation and cultural resource management. The course will consider theoretical approaches including historical anthropology, ethnohistory, world systems and consumer studies.

**3584 Historical Anthropology (A/P) or (S/C)** (same as History 3535) will explore selected issues in historical anthropology, with special reference to the Mediterranean and North Atlantic worlds. Students will read specific case studies in order to explore the theoretical issues raised by the attempt to understand historically-documented past cultures. In order to give practical examples of methodology classes will analyse primary source material. Students will be introduced to the textual analysis of myth and legal records, to the interpretation of images and to the analysis of patterns in material culture. The course will consider specific current interpretive issues, particularly the rise of individualism, the consumer revolution and the cultural construction of gender.

**3585-3586 Practicum in Archaeology (A/P)** offers students practical introductions to archaeological fieldwork (A/P 3585) and laboratory techniques (A/P 3586). These courses provide instruction and experience in site mapping, sampling strategies, the recovery and conservation of archaeological materials (i.e., artifacts and ecofacts) and the cleaning, cataloguing and cultural interpretation of artifacts and features. The students will also receive an introduction to archaeological research concerning prehistoric and/or historic cultures of a selected region.

**3587 Archaeological Conservation: Method and Theory (A/P)** is an introduction to principles and techniques for the preservation of archaeological materials, with an emphasis on conservation in the field. Prerequisite: Anthropology 2480 or equivalent.

**3588 Arctic Prehistory (A/P)** will have lectures and discussion cover cultural developments in the Canadian Arctic, Greenland, and Alaska from the time of initial human occupation to the historic period, with particular emphasis on the eastern Canadian Arctic. Culture history is presented in the context of theoretical and methodological issues and emphasis is placed on culture adaptations to changing environments.

**3589 Art, Architecture and Medieval Life (A/P)** (same as Medieval Studies 3001, History 3020, Folklore 3001) is an examination of the development of medieval art and architecture and of the ways in which they mirror various aspects of life in the Middle Ages. This course will include a discussion of art and architecture in the countryside, in the town, in the castle, in the cathedral and in the cloister.

Note: *It is recommended, but not obligatory, that students should have successfully completed one of the following courses: Anthropology 2480, Folklore 1000 or 2000, History 2320/MST 2001, History 2330/MST 2002, MST 2000.*

**3590 Hunter-Gatherer Studies (A/P) or (S/C)** examines past and present hunting and gathering societies from various areas of the world, both from an ethnographic and an archaeological perspective.  
Prerequisites: (A/P) 1030 and S/C 1031.

**3591 Collections Management (A/P)** (same as Folklore 3591) will introduce students to the problems of collections storage with respect to environment, materials and artifact access. Students will become familiar with the materials encountered in archaeological and ethnographic collections. The storage of specific historic and prehistoric collections from Newfoundland and Labrador will be examined with the purpose of providing practical examples of methodology.

**3600 The Use of Theory in Sociology and Anthropology (S/A)** (see Sociology/Anthropology Interdepartmental Studies Program)

**3610 Society and the Life Cycle (S/A)** (see Sociology/Anthropology Interdepartmental Studies Program)

**3630 New Media Methods in Social Research (S/A)** (see Sociology/Anthropology Interdepartmental Studies Program)

**3680-3689 Studies in Archaeology and Prehistory (A/P)** will include the consideration of current developments in methods, techniques and theory as applied to selected areas of the world.  
Prerequisite: Anthropology 2480 or equivalent.

**3700 Social and Cultural Change (S/A)** - inactive course.

**3710 Museums and Historic Sites (A/P)** (same as Folklore 3700) is an introduction to museums and historic sites, their work, and their role in societies past and present. Various types of museums and historic sites will be discussed using local, national and international examples, looking at their collections and exhibitions policies. Practical issues will also be discussed; these include museum exhibit display techniques, public programming, virtual museums, and the museum profession.

**3800 Fieldwork in Vernacular Architecture: Drawings and Photography (A/P)** - inactive course.

**3850 Material Culture (A/P)** (see Folklore 3850)

**3860 Vernacular Architecture (A/P)** (see Folklore 3860 and History 3860)

**4000 Society and Culture (S/A)** (see Sociology/Anthropology Interdepartmental Studies Program)

**4015 Cultural Resource Management (A/P)** (same as Folklore 4015 and Geography 4015) is a study of cultural resource management: the definition and recognition of cultural resources, the application of policy in managing cultural resources, and the identification and consideration of contemporary issues in cultural resource management.  
Three hours of lecture and three hours of seminar per week.

**4030 Taboo and Law (S/C)** - inactive course.

**4041 Palaeopathology (A/P)** looks at disease, diet, genetics, accidents and maternal health factors as contributors to variations in the human skeleton. In this course these factors are diagnosed from bones, and aspects of the culture, health, economy and environment of the skeletal individuals are examined.  
Prerequisites: A/P 2430 and A/P 3040.

**4042 Recent Developments in the Study of Human Evolution (A/P)** - inactive course.

**4050-4059 Special Projects in Physical Anthropology (A/P)** includes directed reading, seminars and lab analysis of various skeletal collections. Topics to be covered may include primate behaviour, forensic anthropology, and various aspects of human evolution.

**4070 Aboriginal Self-Governance (S/A)** is an advanced course on contemporary issues on the development of, and barriers to, self-government among Canadian aboriginal peoples. The focus will be on topics such as land claims and claims settlements, self-government agreements and proposed agreements, economic development, environmental and social impact of industrial developments, and cultural and religious revival.  
Prerequisite: S/A 3240.

**4071 Social and Cultural Aspects of Health and Illness (S/A)** (see Sociology/Anthropology Interdepartmental Studies Program)

**4072 Social and Cultural Aspects of Death (S/A)** (see Sociology/Anthropology Interdepartmental Studies Program)

**4073 Studies in Underclass Life (S/A)** is a critical inquiry into the social sources of human misery and suffering that characterize life in the underclass

**4074 Ritual and Ceremony (S/A)** - inactive course.

**4077 Advanced Studies in Terror and Society (S/A)** - inactive course.

**4081 Advanced Seminar in the Anthropology of Gender (S/C)** - inactive

course.

**4089 Language and Social Change (S/A)** (see Sociology/Anthropology Interdepartmental Studies Program)

**4091 Oil and Development (S/A)** - inactive course.

**4092 Gender and Social Theory (S/A)**

**4110 Culture and Personality (S/A)** (see Sociology/Anthropology Interdepartmental Studies Program)

**4140-4149 Advanced Interdisciplinary Specialties (S/A)** (see Sociology/Anthropology Interdepartmental Studies Program)

**4150 Environmental Change and Quaternary Geography (A/P)** (same as Geography 4150) examines methods of reconstructing Quaternary environments, effects of Quaternary environmental changes on landform, with special reference to North America, development and characteristics of glacial and non-glacial climates.  
Three hours of lecture and three hours of laboratory per week.  
Prerequisites: Geography 3110, 3150 or permission of Head of Department.

**4151 Paleoethnobotany (A/P)** is a combined directed readings/ laboratory course on palaeoethnobotany. Paleoethnobotany concerns the recovery and analysis of archaeological plant remains as a basis for understanding human and plant interactions in the archaeological record. This course focuses on recent palaeobotanical research in northeastern North America.  
Prerequisites: A/P 2480 and the permission of the instructor.

**4160-4169 Special Projects in Archaeology (A/P)** are courses which may be offered from time to time as demand arises. They may involve readings, seminars and actual analysis of archaeological collections on, for example: The Neolithic of Western Asia; The Rise of Civilization in Western Asia; Scandinavian Prehistory; Palaeoethnobotany; and Technology and Material Culture.  
Prerequisite: Anthropology 2480.

**4170 Settlement and Subsistence Studies in Archaeology (A/P)** - inactive course.

**4182 History of Archaeology (A/P)** is an intensive study of the emergence and maturation of archaeology as a discipline within the social sciences, particularly in Western Europe and North America, during the 19th and 20th centuries.

**4190-4199 Selected Topics in Archaeology and Prehistory (A/P)** is a consideration of recent developments in archaeology and prehistory.  
Prerequisite: Anthropology 2480 or equivalent.

**4200-4209 Special Areas in Anthropology (S/C)** is a series of individual or small group tutorials and reading courses on topics of special or current interest.  
Prerequisite: Departmental permission.

**4280 Advanced Newfoundland Ethnography (S/C)** - inactive course.

**4300 Fieldwork and the Interpretation of Culture (S/C)** - inactive course.

**4301 The Intensive Study of One Culture (S/C)** - inactive course.

**4302 Biography and Culture (S/C)** - inactive course.

**4370 Culture and Traditions of Ireland (S/C)** (same as Folklore 4370)

**4410 History of Social and Cultural Anthropology (S/C)** is a detailed examination of critical issues in the history of anthropology and its various subdisciplines from ancient times to the formation of schools of thought in the late 19th and 20th centuries.  
Prerequisite: At least fourth-year standing in an Arts degree program, including 24 credit hours in Anthropology courses.

**4411 Theory and Method in Archaeology and Prehistory (A/P)** is a seminar course focussing on recent theoretical and methodological developments in archaeological research.  
Prerequisite: A/P 2480 and A/P 4182.

**4412 Modern Cultural Theory (S/C)** is an evaluation of current approaches to culture through psychological, social-structural, critical, and symbolic Anthropology. Emphasis on major works, schools, and personages.

**4422 The Craft of Writing Anthropological Narrative (S/C)** - inactive course.

**4440 Music and Culture (S/C)** (same as Folklore 4440 and Music 4440)

**4450 Land Tenure and Culture (S/C)** - inactive course.

**4451 Ethnography of Gambling (S/C)** - inactive course.

**4452 The Fisheries Revolution (S/C)** - inactive course.

**4500 Special Topic in Historical Archaeology (A/P)** is a consideration of current developments in methods, techniques, and theory in Historical Archaeology.  
Prerequisite: A/P 2480 or permission of instructor.

**4990 Honours Essay (S/A)** (see Sociology/Anthropology Interdepartmental Studies Program)

**4991 Comprehensive Examination (S/A)** (see Sociology/Anthropology Interdepartmental Studies Program) **4996 Comprehensive Examination (A/P) or (S/C)** - inactive course.

**4995 Honours Essay (A/P) or (S/C)**

## 6.3 Arts

**1200 Learning Across Disciplines** is a learning seminar in which students and faculty use discussion, reciprocal feedback and co-investigation techniques to enhance the teaching and learning process in co-requisite courses.

Prerequisites/Co-requisites: two selected regular courses.

## 6.4 Canadian Studies

Program Supervisor: W.J.C. Cherwinski, Department of History.

1. a. This is a multidisciplinary Major program in Canadian Studies offered to candidates for the Bachelor of Arts degree; and it is offered only as a second Major in conjunction with a disciplinary Major.
- b. Since the program draws upon courses in several departments, it is administered by an interdepartmental committee (The Canadian Studies Co-ordinating Committee). The Program Supervisor will advise students upon the selection of courses in the Major .
2. To qualify as a Major in Canadian Studies, students must complete a minimum of 36 credit hours in courses exclusive of their disciplinary Major, including,
  - a. A core of at least 12 credit hours from the following courses: English 2150, Geography 3405, History 2210, Political Science 2710, Sociology/Anthropology 2240
  - b. Canadian Studies 4000.
  - c. The remaining credit hours shall be chosen from the courses listed below, from at least four different departments, and exclusive of any courses applied towards the first Major (\* indicates cross-listed courses). In the event that a course from the above core is part of the disciplinary Major, a student will be required to complete the additional credit hours from the courses listed below.
    - Anthropology 3240\*
    - Economics 3030, 3150, 3620\*, 3711\*, 4025, 4026
    - English 2151, 3152, 3153, 3156, 3157, 3158, 4821, 4822
    - Folklore 3930, 3950, 4300, 4420\*
    - French 3651, 3653, 4310\*, 4420\*, 4500, 4501, 4502
    - Geography 2105, 4640
    - History 1013, 2200, 3130, 3140, 3150, 3620\*, 3630\*, 3650, 3821, 4240, 4241, 4242, 4245, 4249, 4250, 4251
    - Law and Society 3011
    - Linguistics 2025, 2026, 2030, 2031, 2060, 4310\*
    - Music 3016
    - Political Science 1010, 2711, 3700, 3710, 3711\*, 3720, 3730, 3741, 3751\*, 3760, 3770, 3790, 4750, 4790
    - Religious Studies 3902, 3903
    - Sociology 3240\*, 3306, 3395
    - Sociology/Anthropology 3240\*
 And any special topics courses approved for inclusion in this list by the Committee on Undergraduate Studies, Faculty of Arts.
3. In addition, a demonstration of adequate knowledge in both written and oral French is required. A candidate is deemed to have demonstrated adequate knowledge upon either passing an examination set by the French Department or by completing French 2100 with a "B" standing.
4. The normal departmental prerequisites are applicable, but Department Heads may waive course prerequisites in the Canadian Studies area for Canadian Studies Majors when alternate preparation can be demonstrated.

### 6.4.1 Course List

**4000 Interdisciplinary Seminar in Canadian Studies** will expose students to the interdisciplinary approach to the study of Canada through a series of lectures and discussions conducted by members of departments represented on the Canadian Studies Major Program Co-ordinating Committee and through the preparation of formal written work which explores a specific theme from a variety of disciplinary perspectives.

Prerequisite: Permission of the Supervisor of the Canadian Studies Major Program.  
 Note: *Credit may not be obtained for both Canadian Studies 4000 and History 4247.*

## 6.5 Classics

### 6.5.1 Programs and Regulations

Programs of the Department of Classics are designed to acquaint students with the ancient Greek and Roman cultures from which our Western Civilization has developed. The Department provides instruction in the Greek (Classical and New Testament) and Latin Languages and Literatures. In addition, the Department offers a wide selection of courses in Greek and Roman Studies which are primarily intended for students who desire an acquaintance with the ancient world without a knowledge of the languages.

### 6.5.2 General Degree

#### 6.5.2.1 Major in Classics

This program emphasizes the learning of classical languages as a means to study ancient literary and historical texts. Candidates for a Major in Classics shall decide their program in consultation with the Department.

Students who wish to pursue a Major in Classics will take either Classics 1120 and 1121 or Classics 1130 and 1131 and at least 30 additional credit hours in Classics, of which at least 18 credit hours must be in either Greek or Latin. A total of at least 18 credit hours in Classics must be at the 3000 level or above.

#### 6.5.2.2 Major in Greek and Roman Studies

This program emphasizes the study of Greek and Roman civilization through the close reading of ancient texts in translation.

Candidates for a Major in Greek and Roman Studies will complete their programs in consultation with the Department Head.

1. Classics 1050 or 1100 or 1200
2. Either a. or b.:
  - a. Classics 1120 and 1121
  - b. Classics 1130 and 1131
3. Fifteen credit hours in courses at the 2000 level.
4. Eighteen credit hours in courses at the 3000 level or above

### 6.5.2.3 Minor in Classics

Students wishing to pursue a minor in Classics will take 24 credit hours in Greek and Roman Studies courses. In place of any of these the student may substitute courses in Greek or Latin.

### 6.5.2.4 Honours in Classics

Candidates for Honours in Classics shall consult the Department before finalizing their program.

1. Classics 1120 and 1121 and Classics 1130 and 1131;
2. At least 9 credit hours selected from Classics 2200, 2205, 2300, and 2305;
3. Classics 4998 or 4999;
4. At least 36 additional credit hours in Classics at the 3000 level or above, of which 18 must be in Latin or Greek. Classics 2202 and 2302 may be substituted for courses at the 3000 level.

### 6.5.2.5 Joint Honours in Classics

Classics may be combined with another subject to form a Joint Honours program. The Joint Honours Program in Classics shall include at least 51 credit hours in Classics, including the following.

1. Classics 1120 and 1121 or Classics 1130 and 1131;
2. At least 6 credit hours selected from Classics 2200, 2205, 2300, 2305;
3. At least 30 additional credit hours in Classics at the 3000 level or above, of which at least 15 must be in Greek or Latin. Classics 2202 and 2302 may be substituted for courses at the 3000 level.

### 6.5.2.6 Honours in Greek and Roman Studies

Candidates for Honours in Greek and Roman Studies shall consult the Department before finalizing their program.

1. Classics 1050 or 1100 or 1200;
2. Either a. or b.:
  - a. Classics 1120 and 1121
  - b. Classics 1130 and 1131
3. 15 credit hours in courses at the 2000 level;
4. 36 credit hours in courses at the 3000 level or above, including 4998 or 4999.

### 6.5.2.7 Joint Honours in Greek and Roman Studies

Greek and Roman Studies may be combined with another subject to form a Joint Honours program. The Joint Honours Program in Greek and Roman Studies shall include at least 51 credit hours in Classics.

1. Classics 1050 or 1100 or 1200;
2. Either a. or b.:
  - a. Classics 1120 and 1121
  - b. Classics 1130 and 1131
3. 15 credit hours in courses at the 2000 level;
4. 27 credit hours in courses at the 3000 level or above.

## 6.5.3 Prerequisites

Note: *Although there are no formal prerequisites for any course in Greek and Roman Studies, students are encouraged to ensure that they have adequate preparation for the courses numbered above 3000 in which they intend to register.*

1. Classics 2200 is the normal prerequisite for Classics 2205.
2. Classics 2205 is the normal prerequisite for any Latin course in the 3000 or 4000 series.
3. Classics 2300 is the normal prerequisite for Classics 2305.
4. Classics 2305 is the normal prerequisite for any Greek course in the 3000 or 4000 series.

In special circumstances, prerequisites may be waived with the permission of the Head of the Department.

Medieval Studies 3000 may be substituted for a Greek and Roman Studies course in both the Classics degree programs (Honours, Joint Honours and general degree) and the Greek and Roman Studies degree programs (Honours, Joint Honours and general degree).

## 6.5.4 Course List

In accordance with Senate's *Policy Regarding Inactive Courses*, the course descriptions for courses which have not been offered in the previous three academic years and which are not scheduled to be offered in the current academic year have been removed from the following listing. For information about any of these inactive courses, please contact the Head of the Department.

### 6.5.4.1 Courses in Greek

**1130 Elementary Ancient Greek I** is an introduction to the grammar and

syntax of ancient Greek, with particular attention paid to the acquisition of basic skills in reading, composition, and aural comprehension.

Note: *Students may not receive credit for Classics 1130 and the former Classics.*

**1131 Elementary Ancient Greek II** is a continuation of the work begun in Elementary Ancient Greek I.

Note: *Students may not receive credit for Classics 1131 and the former Classics 130B.*

Prerequisite: Classics 1130 or its equivalent.

**2300 Intermediate Ancient Greek** is a continuation of the grammar, syntax, reading, and composition completed in the elementary program.



Prerequisite: Classics 1131.

**2302 Readings in New Testament Greek** - inactive course.

**2305 Selected Attic Authors**

Note: *Students may not receive credit for Classics 2305 and the former Classics 2301.*

**3310 Greek Tragedy I**

**3315 Attic Orators**

**3320 Greek Historians**

**3331 Greek Comedy** - inactive course.

**4300 Greek Tragedy II** - inactive course.

**4310 Greek Epic Poetry**

**4320 Greek Lyric Poetry** - inactive course.

**4335 Greek Literature of the Roman Period** - inactive course.

**4340 Greek Philosophical Authors**

**4370 Hellenistic Poetry** - inactive course.

**4391 Special Authors** - inactive course.

**4395 Greek Prose Composition** - inactive course.

**4998 Honours Comprehensive Examination**

**4999 Honours Essay**

### 6.5.4.2 Courses in Latin

**1120 Elementary Latin I** is an introduction to the grammar and syntax of Latin, with particular attention paid to the acquisition of basic skills in reading, composition, and aural comprehension.

Note: *Students may not receive credit for Classics 1120 and the former Classics 120A.*

**1121 Elementary Latin II** is a continuation of the work begun in Elementary Latin I.

Note: *Students may not receive credit for Classics 1121 and the former Classics 120B.*

Prerequisite: Classics 1120 or its equivalent.

**2200 Intermediate Latin** is a continuation of the grammar, syntax, reading, and composition completed in the elementary program.

Prerequisite: Classics 1121.

**2202 Medieval Latin** - inactive course.

**2205 Selected Latin Authors**

Note: *Students may not receive credit for Classics 2205 and the former Classics 2201.*

**3210 Latin Lyric Poetry**

**3215 Latin Orators** - inactive course.

**3225 Latin Epistolography** - inactive course.

**3230 Latin Elegiac Poetry**

**4210 Latin Historians**

**4220 Latin Hexameter Poetry**

**4235 Latin Philosophical Authors** - inactive course.

**4240 Latin Drama**

**4250 Latin Satire**

**4271 Latin Patristic Authors** - inactive course.

**4291 Special Authors**

**4295 Latin Prose Composition** - inactive course.

**4998 Honours Comprehensive Examination**

**4999 Honours Essay**

### 6.5.4.3 Greek and Roman Studies

Note: *For the following courses, no knowledge of Greek or Latin is required.*

**1050 Introduction to Greek and Roman Mythology** is a survey of the principal myths and legends of the ancient Greeks and Romans. Attention will be paid to the literary and artistic representations of these myths, as well as to modern methods of interpretation.

**1100 Introduction to Greek Civilization** is a general illustrated survey of the origins and evolution of Ancient Greek Civilization. The course introduces the student to Greek social and political institutions, religion and myth, and achievements in art, philosophy, science and literature, as well as

the influence of Ancient Greece on the modern world.

Note: *Students may not receive credit for Classics 1100 and either of the former Classics 1000 or 2000. This course may qualify as a Research/Writing course.*

**1200 Introduction to Roman Civilization** is a general illustrated survey of the origins and evolution of Ancient Rome. The course introduces the student to social, political, and legal institutions, the growth of the Roman Empire, Roman art, literature, and religions, as well as Rome's pervasive influence in the modern world.

Note: *Students may not receive credit for Classics 1200 and any of Classics 1000, 1101, or 2001. This course may qualify as a Research/Writing course.*

**2010 Greek Art and Architecture** is an introduction, through illustrated lectures, to the study of the art and architecture of Ancient Greece.

Note: *Students may not receive credit for Classics 2010 and either of the former Classics 3100 or 3101.*

**2015 Roman Art and Architecture** is an introduction, through illustrated lectures, to the study of the art and architecture of Ancient Rome.

Note: *Students may not receive credit for Classics 2015 and either of the former Classics 3100 or 3102.*

**2020 Hellenistic Civilization** is an illustrated survey of the political, social, intellectual and artistic developments in the Mediterranean world and the Near East from the death of Alexander the Great in 323 B.C. until the incorporation of the Kingdom of Egypt in the Roman Empire in 30 B.C. Particular attention is given to the fusion of eastern and western thought-patterns and ideologies under the influence of Greek culture.

**2025 Introduction to Ancient History** (same as History 2020) is an introduction to the history of ancient city-states, kingdoms and empires, including economic, social, political and cultural developments.

**2035 History of Classical Greece** (same as History 2035) is a survey of Greek History from the Bronze Age to the death of Alexander the Great, with special reference to the social and political institutions of the fifth century B.C.

Note: *Students may not receive credit for Classics/History 2035 and either of the former Classics/History 3910 or Classics/History 2030.*

**2040 History of Rome** (same as History 2040) is a survey of Roman History from the early monarchy to the reign of Constantine with special reference to society and politics in the late Republic and early Empire.

Note: *Students may not receive credit for Classics/History 2040 and the former Classics/History 3920.*

**2055 Women in Greece and Rome** is an examination of the role of women in ancient Greece and Rome from the perspectives of religion, literature, art, society, and politics. Critical assessments of relevant scholarship and methodologies (including feminist methodologies) will be included.

**2060 The Heroic Epic in Greece and Rome** is a survey of epic poetry from the archaic period to late antiquity, with emphasis on the works of Homer and Vergil.

**2701 History of Ancient Philosophy** (same as Philosophy 2701) is a survey of the origin and development of Western philosophy among the Greeks and Romans.

**2805 Greek Tragedy and Society** is a survey of the development of Greek tragedy in its social, literary, and theatrical contexts, with comprehensive analyses of selected plays by the major tragedians, Aeschylus, Sophocles, and Euripides. Students may not receive credit for both Classics 2805 and Classics 2800.

**2810 Ancient Comedy and Society** is a survey of the development of Greek and Roman comedy in their social, literary, and theatrical contexts, with comprehensive analyses of selected plays by major comedic playwrights such as Aristophanes, Menander, and Plautus. Students may not receive credit for both Classics 2810 and Classics 2801.

**3010 Greek Religion** (same as Religious Studies 3010) is a study of the role of religion in the private and public life of the Greek world.

Note: *Students may not receive credit for Classics/Religious Studies 3010 and the former Classics/Religious Studies 3121.*

**3020 Roman Religion** (same as Religious Studies 3020) is a study of the role of religion in the private and public life of the Roman world.

Note: *Students may not receive credit for Classics/Religious Studies 3020 and the former Classics/Religious Studies 3121.*

**3030 Greece and Persia** is a study of relations between Greece and Persia from the foundation of the Persian Empire to the death of Alexander the Great.

**3040 Socrates and Athens** is an introduction to and examination of Socrates within the context of Athenian political, social, cultural, intellectual, and religious life, and against the background of the fifth-century enlightenment and the sophistic movement.

Note: *Students may not receive credit for Classics 3040 and the former Classics 2050.*

**3050 Augustus and Rome** is a course that examines the Age of Augustus (27 B.C. to A.D. 14) which witnessed not only Rome's greatest achievements in literature and art but also the replacement of republican

government by a monarchy; this course, based on original sources, examines the period through its most powerful and influential figure.

Note: *Students may not receive credit for Classics 3050 and the former Classics 2051.*

**3060 Sport and Athletics in Ancient Society** traces the evolution of athletics and other forms of recreation in Greece and Rome, with the emphasis on their religious, cultural, and social importance. Topics will include sports in Homer, the concept of *arete*, the Olympic 'ideal', gladiatorial contests, Greek athletics and the Roman Empire.

Note: *Students may not receive credit for Classics 3060 and the former Classics 2160.*

**3080 Themes and Genres in Greek and Roman Prose** is a detailed study of individual works in prose designed to illustrate themes or genres in the prose literature of Greece and Rome, such as the novel, biography, oratory, and historiography.

**3130 Greek and Roman Mythology** (same as Folklore 3130) is a comparative study of specific myths and folktales of Greece and Rome as embodied in the literary and artistic remains of the ancient world with reference to their origins and their influence on later art and literature.

**3150 Early Christian Thought: The First Five Centuries** (same as Religious Studies 3150) is an advanced study of selected themes and personalities in Christian thought and literature from the second to the sixth centuries. Particular attention will be given to the controversies centering on the doctrines of the Trinity and the Person of Christ.

**3270 Christianity and the Roman Empire** (same as History 3270 and Religious Studies 3270) is a study of the relationship between Christianity and the Roman Empire from the first to the fourth century.

**3580 Bronze Age Archaeology of the Eastern Mediterranean** - inactive course.

**3710-3729 Special Topics in Classics** (available only as part of the Harlow campus semester)

**4000 Seminar in Greek History and Society**

**4010 Seminar in Roman History and Society**

**4020 Seminar in Greek Literature and Culture**

**4030 Seminar in Roman Literature and Culture**

**4100-4109 Special Topics in Greek and Roman Studies** will have topics announced by the Department and may include field studies in topography, Greek and Roman art and architecture, archaeology, and related areas, to be held in the Mediterranean and other regions of Graeco-Roman influence. Prerequisite: Permission of the instructor and the Head of the Department.

**4998 Honours Comprehensive Examination**

**4999 Honours Essay**

## 6.6 Computer Science

For Departmental Regulations and Course Descriptions, see Faculty of Science section of the Calendar.

## 6.7 Drama and Music

Program Supervisor: D.C. Lynde, Department of English

1. a. This is an Interdisciplinary Major Program in Drama and Music offered to candidates for the Bachelor of Arts degree, under paragraph 3. b. of the Regulations for the General Degree of Bachelor of Arts.
- b. Since the program is interdisciplinary, it is administered by an interdepartmental committee (The Drama and Music Co-ordinating Committee). The Program Supervisor will advise students upon the selection of courses in the Major.
2. To qualify as a Major in Drama and Music, students must complete a minimum of 54 credit hours as follows:
  - a. **Department of English-Drama Courses**  
Students must complete at least 27 credit hours in English, as follows:
    - i. Six credit hours in English at the 1000 level, preferably including 1102
    - ii. 2002, 3350, 3351, 4400, 4401
    - iii. Three additional credit hours in English at the 2000 level
    - iv. Three credit hours in courses chosen from 3021, 3022, 3156, 3171, 3181, 3200, 3201, 3260, 3302, 4302.
  - b. **School of Music - Music Courses**
    - i. Students must complete at least 27 credit hours in Music, as follows:
      - Music 2011 and 2012
      - Music 1107, 1108, 1117, 1118, 1127 or 1137, and 1128 or 1138
      - Music 2107 and 2117
      - Music 2311
      - Music 2013 or Music 3007
      - Two (2) credit hours of large ensemble, chosen from Music 2611-2616.
    - ii. Further courses in music theory and/or music history may be chosen as Arts electives.
    - iii. Course prerequisites stipulated in the course descriptions must be met. In particular, note the prerequisites for Music 1107 and 1127.
    - iv. Most music courses are not offered every semester, and some are offered only in alternate years.

## 6.8 Economics

### 6.8.1 Programs in Economics

The following programs are available in the Department:

1. Major in Economics (B.A. or B.Sc.)
2. Honours in Economics (B.A. or B.Sc.)
3. Honours in Economics (Co-operative), (B.A. or B.Sc.)
4. Minor in Economics
5. Joint Programs (B.Sc. Only)
6. Joint Program (Co-operative) (B.Sc. Only)
7. Major in Economics (Co-operative) (B.A. or B.Sc.)

### 6.8.2 Admission Regulations (B.Sc.)

Students are normally admitted to the B.Sc. Program upon successful completion of 30 credit hours which must include:

1. Six credit hours in English courses
2. Six credit hours in Mathematics courses

### 6.8.3 Major in Economics (B.A. or B.Sc.)

1. Students may Major in Economics as part of either a B.A. or a B.Sc program. See the General Regulations for the B.A. and B.Sc. Degrees as appropriate.
2. Economics 2010 and 2020 are prerequisites for all other Economics courses except Economics 2070.
3. Economics 2550, 3000 and 3010 are prerequisites for all 4000-level courses.
4. Candidates shall consult with the Head of the Department or delegate when choosing courses for a Major in Economics.
5. Mathematics 1000 or its equivalent is the prerequisite for Economics 3000, 3010, and 3550.
6. B.A. candidates who undertake a Major in Economics shall complete Statistics 2500 and at least 39 credit hours in courses in Economics of which:
  - a. 2010, 2020, 2550, 3000, 3001, 3010 and 3550 are obligatory.
  - b. Eighteen credit hours shall be chosen from among the various Economics courses in consultation with the Head of the Department or delegate, and will include at least 9 credit hours in courses at the 4000-level.
  - c. Candidates may, with the approval of the Head of the Department or delegate, substitute Statistics 2510 for Statistics 2500.
7. B.A. candidates majoring in Economics shall complete a minor of 24 credit hours in one other approved subject, or a second Major in accordance with General Regulations. It is recommended that the Minor or second Major be chosen from the following subjects: Business, Mathematics, Political Science, Statistics, Computer Science, History, Geography, Philosophy, Sociology, or Anthropology.
8. B.Sc. candidates who undertake a Major in Economics shall complete at least 42 credit hours in courses in Economics of which:
  - a. 2010, 2020, 2550, 3000, 3001, and 3010 are obligatory
  - b. Six credit hours shall be chosen from either 3550 and 3551, OR 4550 and 4551
  - c. Eighteen credit hours shall be chosen from among the various Economics courses in consultation with the Head of the Department or delegate, and will include at least 9 credit hours in courses at the 4000-level.
9. B.Sc. candidates must complete credits from other Science disciplines as follows:
  - a. Mathematics 1000, 1001, and 2050
  - b. Statistics 2510, or its equivalent, and an additional 3 credit hours of Statistics
  - c. Computer Science 1700, and an additional 3 credit hours of Computer Science. With the approval of the Head of the Department or delegate, candidates may substitute another 1000-level Computer Science course for Computer Science 1700. Minors in Computer Science should enroll in Computer Science 1710.
  - d. At least 3 credit hours in an additional science subject other than Mathematics/Statistics, Economics, and Computer Science

### 6.8.4 Honours in Economics (B.A. or B.Sc.)

1. See the General Regulations for the B.A. and B.Sc. (Honours) Degrees.
2. All candidates shall consult with the Head of the Department or delegate when choosing courses for an Honours program.
3. All candidates shall complete all non-Economics courses required of B.A. or B.Sc. Majors, and at least 60 credit hours in courses in Economics, of which 2010, 2020, 2550, 3000, 3001, 3010, 3011, 3550, 3551, 4550 and 4551 shall be chosen.
4. Twenty-four credit hours in electives in Economics shall be chosen in consultation with the Head of the Department or delegate, including at least 9 credit hours in courses at the 4000-level. In addition, all Economics Honours candidates are required to write an essay.

### 6.8.5 Minor in Economics

1. Economics 2010, 2020, 3000, and 3010 are obligatory.
2. Twelve credit hours in Economics electives shall be chosen in consultation with the Head of the Department or Delegate.
3. Course prerequisites stipulated in the General Degree regulations and in the course descriptions shall apply to a Minor in Economics.

### 6.8.6 Joint Programs

Programs for Joint Majors in Economics and Computer Science, Pure Mathematics, Applied Mathematics or Statistics, and a Joint Major in Statistics and Economics (Co-operative) are found under the heading **Joint Programs** in the entry for the Faculty of Science.

Students who wish to take a Joint Major in Economics and Computer Science, Mathematics or Statistics must arrange their program in consultation with the heads of the respective departments and comply with the General Regulations for the Majors Degrees.

### 6.8.7 Major in Economics (Co-operative), (B.A. or B.Sc.)

#### Economics Co-operative Education Option (ECEO)

This Economics Program is available to full-time Economics majors (B.A. and B.Sc.) only.

The ECEO provides an excellent mutual opportunity for students and employers. Qualified students will obtain rewarding employment experience in fields related to Economics for several months of continuous duration. Students will learn valuable practical skills in an employment situation during their course of study. Furthermore, paid employment will help to defray the cost of their education. The timing of the Work Terms and the structure of the ECEO generally are such that employers stand to gain from the acquired employable skills of economists in training. The objectives of the Work Term component of the ECEO are embodied in the Work Term descriptions below. The descriptions serve to guide the student and the employer toward achieving these objectives.

#### 1. Admission Requirements

- a. Admission is competitive and selective. Therefore, prospective students are encouraged to consider an alternate degree program in the event that they are not accepted into the Co-operative program.
- b. Applicants should note that it is possible to enter Term 1 only in the Fall semester commencing in September of each academic year. Application forms are available in the Department of Economics. The deadline for applications for admission to Term 1 is March 1.
- c. The primary criterion used in reaching decisions on applications for admission is overall academic achievement. Students with weak overall academic records are unlikely to be admitted.

- d. To be eligible for admission to Term 1 an applicant must have successfully completed a minimum of 30 credit hours with an overall average of at least 65% as follows: All applicants must have completed Economics 2010 and 2020; at least 6 credit hours in English\*; Mathematics 1000; and 15 credit hours chosen from courses in the Faculties of Arts\*\* or Science. B.Sc. applicants must have completed Mathematics 1001.

\*It is recommended that students complete English 1110 as one of these English courses.

\*\*It is also advised that B.A. students choose courses which can satisfy the requirements for the Core Program (see Arts Degree Regulations for these requirements), including courses in a second language.

- e. Students may apply for admission to Advanced Standing.  
f. Transfer students from other universities will be placed in that term of the program judged to be appropriate considering equivalent credits, as determined by the Department.

## 2. Program of Study

- a. Promotion from each of Terms 1 through 6 requires a passing grade in all specified required courses and an overall average of at least 60% in all courses including electives. A student who fails a required course or fails to maintain the overall average of 60% will not be promoted to the next term and will be required to withdraw from the program. The student in question may apply for readmission in a subsequent year after passing the specified required course(s) previously failed, or re-establishing the 60% average.  
b. In addition to the 30 credit hours required for admission, students are required to complete the six academic terms in the ECEO program for a total of 120 credit hours. Students must complete three Work Terms which follow Academic Terms 2, 4, and 5.  
c. Courses shall normally be taken in academic terms or "blocks" in the sequenced course load and order as set out in the table **Major in Economics (Co-operative Option) B.A. Academic Course Program** or in the table **Major in Economics (Co-operative Option) B.Sc. Academic Course Program**. Unspecified credits may be used to fulfill elective requirements only.  
d. **UNIVERSITY REGULATIONS - General Academic Regulations (Undergraduate) Classification of Students** notwithstanding, students do not require special permission to register for courses while on work terms if the courses are in addition to the prescribed program.

## 3. Work Term Placement

- a. General management of the work terms in the ECEO is the responsibility of the Co-operative Education Services Centre (CESC). It is responsible for assisting potential employers to become involved in the program, organizing competitions for Work Term employment, arranging student-employer interviews and facilities, data base management, and for the continual development of employment opportunities. The program co-ordinator (hereafter referred to as co-ordinator) is an Academic Staff member who will work with the department to counsel students, visit students on their work assignments and evaluate the work term.  
b. Work placement is not guaranteed but every effort is made to ensure that appropriate employment is made available. In the case of students who are required to withdraw from the program, the CESC has no responsibility for placement until they have been re-admitted to the program.  
c. A student who applies for admission to the co-op program gives permission to the University to provide a copy of the applicant's resume, university transcript and work term evaluations to potential employers.  
d. A student who has been accepted to the ECEO program may obtain his/her own work term placement outside the competition. Such employment positions must be confirmed by the employer, and must be approved by the co-ordinator.  
e. Students are expected to submit, within a month from starting a Work Term, a plan of the intended work that term.  
f. Salaries paid to co-operative students are determined by employers based on their internal wage structures, and tend to increase as the student progresses through the program and assumes more responsibility. However, students should not expect the income from work terms to make them completely self-supporting.

## 4. Registration and Evaluation of Performance

- a. In Work Terms I, II, and III, students must register for Economics 299W, 399W, and 499W respectively.  
b. Student performance evaluations are to be completed by the employer and returned to the co-ordinator. The Work Term evaluations shall consist of two components:

### i. On-the-job Student Performance:

Job performance shall be assessed by the co-ordinator in consultation with the department using information gathered during the Work Term and input from the employer towards the end of the Work Term. Formal written documentation from the employer shall be sought. Evaluation of the job performance will result in one of the following classifications: OUTSTANDING, ABOVE EXPECTATIONS, SATISFACTORY, MARGINAL PASS, FAIL.

### ii. The Work Report:

- Students are required to submit a Work Term report to the co-ordinator on the first day of final exams.
- Work Term reports shall be evaluated by a faculty member and the co-ordinator.
- If an employer designates a report to be of a confidential nature, both employer and the co-ordinator must agree as to the methods to protect the confidentiality of such a report before the report may be accepted for evaluation.
- Reports must contain original work related to the Work Term placement. The topic must relate to the work experience and will be chosen by the student in consultation with the employer. The topic must be approved by the co-ordinator or a faculty member of the Department of Economics.

Evaluation of the work term will result in one of the following classifications: OUTSTANDING, ABOVE EXPECTATIONS, SATISFACTORY, MARGINAL PASS, FAIL.

The evaluation of the job performance and the work term report are recorded separately on the transcript. Overall evaluation of the work term will result in one of the following final grades being awarded:

- Pass with Distinction: Indicates OUTSTANDING PERFORMANCE in both the work report and the job performance.
- Pass: Indicates that PERFORMANCE MEETS EXPECTATIONS in both the work report and the job performance.
- Fail: Indicates FAILING PERFORMANCE in the work report or the job performance.

For promotion from the Work Term, a student must obtain at least a Pass. Students should also refer to the **UNIVERSITY REGULATIONS - General Academic Regulations (Undergraduate)** of the University.

The grades awarded for each work term will be noted on the transcript of the student.

- c. If a student fails to achieve the Work Term standards specified above the student will be required to withdraw from the program.

Such a student may reapply to the program after a lapse of two semesters, at which time the student will be required to repeat the Work Term with satisfactory performance before being admitted to any further academic term in the Faculty. A given work term may be repeated only once, and not more than two work terms may be repeated in the entire program.

- d. In order to be considered for readmission, students must formally apply for readmission to the program not later than the deadline date specified in Clause b. of the Admission section 1. above.
- e. A student who withdraws from a Work Term without acceptable cause subsequent to a job placement will be required to withdraw permanently from the Co-operative education program. Students who drop a Work Term without prior approval from both the co-ordinator and the Head of the Department of Economics, or who fail to honour an agreement to work with an employer, or conduct themselves in such a manner as to cause their discharge from the job will normally be awarded a failed grade for the Work Term in question. Permission to drop a Work Term does not constitute a waiver of degree requirements, and students who have obtained such permission must complete an approved Work Term in lieu of the one dropped.

### 6.8.8 Honours in Economics (Co-operative), (B.A. or B.Sc.)

#### 1. Admission Requirements

See Major in Economics (Co-operative), (B.A. or B.Sc.) Economics Co-operative Education Option (ECEO) and the General Regulations for the B.A. and B.Sc. (Honours) Degrees.

#### 2. Program of Study

- a. See the General Regulations for the B.A. and B.Sc. (Honours) Degrees.
- b. All candidates shall consult with the Head of the Department or delegate when choosing courses for an Honours program.
- c. All candidates shall complete all non-Economics courses required of B.A. or B.Sc. Majors, and at least 60 credit hours in Economics, of which 2010, 2020, 2550, 3000, 3001, 3010, 3011, 3550, 3551, 4120, 4550 and 4551 shall be chosen.
- d. Twenty-one credit hours in electives in Economics shall be chosen in consultation with the Head of the Department or delegate, including at least 6 credit hours in courses at the 4000-level. In addition, all Economics Honours candidates are required to write an essay.
- e. Promotion from each of Terms 1 through 6 requires a grade of 70% in all specified required courses and an overall average of at least 70% in all courses including electives. A student who fails a required course or fails to maintain an overall average of 70% will not be promoted to the next term and will be required to withdraw from the program. The student in question may be eligible from readmission in the subsequent year after passing the specified required course(s) previously failed, or re-establishing the 70% average. See also **UNIVERSITY REGULATIONS - Regulations for the Honours Degree**.
- f. In addition to the 30 credit hours required for admission, students are required to complete the six academic terms in the ECEO program for a total of 120 credit hours. Students must complete three Work Terms, which follow Academic Terms 2, 4 and 5.
- g. Courses shall normally be taken in academic terms or "blocks" in the sequenced course load and order set out in the table **Honours in Economics (Co-operative Option) B.A. Academic Course Program** or in the table **Honours in Economics (Co-operative Option) B.Sc. Academic Course Program**. Unspecified credits may be used to fulfill elective requirements only.
- h. **UNIVERSITY REGULATIONS - General Academic Regulations (Undergraduate)**, Classification of Students notwithstanding, students do not require special permission to register for courses while on work terms if the courses are in addition to the prescribed program.

#### 3. Work Term Placement

See Major in Economics (Co-operative), (B.A. or B.Sc.) Economics Co-operative Education Option (ECEO).

#### 4. Registration and Evaluation of Performance

See Major in Economics (Co-operative), (B.A. or B.Sc.) Economics Co-operative Education Option (ECEO).

**Major in Economics (Co-operative Option) B.A. - Academic Course Program Table**

<b>Term 1 (Fall)</b> Economics 3000 Economics 3550 Statistics 2500 Six Credit Hours in Minor, Core and elective courses [see Notes 1. and 2. below]	<b>Work Term II (Spring)</b> Economics 399W
<b>Term 2 (Winter)</b> Economics 3001 Economics 3010 Economics 2550 Six credit hours in Minor, Core and elective courses [see Notes 1. and 2. below]	<b>Term 5 (Fall)</b> Six further credit hours in Economics courses Nine credit hours in Minor, Core and elective courses [see Notes 1. and 2. below]
<b>Work Term I (Spring)</b> Economics 299W	<b>Work Term III (Winter)</b> Economics 499W
<b>Term 3 (Fall)</b> Economics 4550 Twelve credit hours in Minor, Core and elective courses [see Notes 1. and 2. below]	<b>Term 6 (Spring)</b> Six further credit hours in Economics courses Nine credit hours in Minor, Core and elective courses [see Notes 1. and 2. below]
<b>Term 4 (Winter)</b> Economics 3011 Economics 4120 Economics 4551 Six credit hours in Minor, Core and elective courses [see Notes 1. and 2. below]	

- Notes: 1. Courses specified for admission to and completion of the ECEO only partially satisfy the Core Requirements for the Degree of Bachelor of Arts. Additional Core Requirements are 6 credit hours in the SAME second language, 3 credit hours in a Social Science course (other than Economics), 12 credit hours in Humanities courses, as well as 6 credit hours in research/writing courses (which may be met within the major and minor programs and/or in courses completed for the Social Science and Humanities requirements). These additional requirements should be completed before and following admission to Term 1 as part of the Minor program and elective components of the degree. Students are reminded that careful planning is necessary to ensure that all Core and minor requirements are satisfied.
2. A minor is required for a B.A. degree in economics.

**Major in Economics (Co-operative Option) B.Sc. - Academic Course Program Table**

<b>Term 1 (Fall)</b> Economics 3000 Economics 3550 Statistics 2510 Computer Science 1700 Three credit hours in elective courses [see Note 1.]	<b>Work Term II (Spring)</b> Economics 399W
<b>Term 2 (Winter)</b> Economics 3001 Economics 3010 Economics 2550 Mathematics 2050 Three credit hours in elective courses [see Note 1.]	<b>Term 5 (Fall)</b> Six further credit hours in Computer Science courses [see Note 2.] Nine credit hours in elective courses [see Note 1.]
<b>Work Term I (Spring)</b> Economics 299W	<b>Work Term III</b> Economics 499W
<b>Term 3 (Fall)</b> Economics 4550 Three further credit hours in Economics courses Nine credit hours in elective courses	<b>Term 6 (Spring)</b> Six further credit hours in Economics courses Nine credit hours in elective courses [see Note 1.]
<b>Term 4 (Winter)</b> Economics 3011 Economics 4120 Economics 4551 Three further credit hours in Statistics courses [see Note 2.] Three credit hours in elective courses [see Note 1.]	

- Notes: 1. Elective courses should be chosen with reference to the Regulations for the General Degree of Bachelor of Science, since courses specified for admission to and completion of the ECEO only partially satisfy these regulations. In particular note that (i) at least 78 credit hours (26 courses) in Science subjects are required and that (ii) at least 3 credit hours in an additional Science subject other than Mathematics/Statistics, Economics and Computer Science must be included in these Science courses.
2. The Statistics and Computer Science elective courses may both be taken in either Term 4 or 5.

**Honours in Economics (Co-operative Option) B.A. - Academic Course Program Table**

<b>Term 1 (Fall)</b> Economics 3000 Economics 3550 Statistics 2500 Six credit hours in Minor, Core and elective courses [see Notes 1. and 2.]	<b>Work Term II (Spring)</b> Economics 399W
<b>Term 2 (Winter)</b> Economics 3001 Economics 3010 Economics 2550 Six credit hours in Minor, Core and elective courses [see Notes 1. and 2.]	<b>Term 5 (Fall)</b> Nine further credit hours in Economics courses [see Note 3.] Six credit hours in Minor, Core and elective courses [see Notes 1. and 2.]
<b>Work Term I (Spring)</b> Economics 299W	<b>Work Term III (Winter)</b> Economics 499W
<b>Term 3 (Fall)</b> Economics 4550 Six further credit hours in Economics courses [see Note 3.] Six credit hours in Minor, Core and elective courses [see Notes 1. and 2.]	<b>Term 6 (Spring)</b> Six further credit hours in Economics courses [see Note 3.] Nine credit hours in Minor, Core and elective courses [see Notes 1. and 2.]
<b>Term 4 (Winter)</b> Economics 3011 Economics 3551 Economics 4120 Economics 4551 Three credit hours in Minor, Core and elective courses [see Notes 1. and 2.]	

- Notes: 1. Courses specified for admission to and completion of the ECEO only partially satisfy the Core Requirements for the Degree of Bachelor of Arts (Honours). Additional Core Requirements are six credit hours in the SAME second language, three credit hours in a Social Science course (other than Economics), twelve credit hours in Humanities courses, as well as six credit hours in research/writing courses (which may be met within the major and minor programs and/or in courses completed for the Social Science and Humanities requirements). These additional requirements should be completed before and following admission to Term 1 as part of the Minor program and elective components of the degree. Students are reminded that careful planning is necessary to ensure that all Core and minor requirements are satisfied.
2. A minor is required for a B.A. degree (Honours) in Economics.
3. Twenty-one credit hours in electives in Economics shall be chosen in consultation with the Head of Department or delegate, including at least 6 credit hours in courses at the 4000-level. In addition, all Economics Honours candidates are required to write an essay.

**Honours in Economics (Co-operative Option) B.Sc. - Academic Course Program Table**

<b>Term 1 (Fall)</b> Economics 3000 Economics 3550 Statistics 2510 Computer Science 1700 [see Note 1] Three credit hours in elective courses [see Note 2.]	<b>Work Term II (Spring)</b> Economics 399W
<b>Term 2 (Winter)</b> Economics 3001 Economics 3010 Economics 2550 Mathematics 2050 Three credit hours in elective courses [see Note 2.]	<b>Term 5 (Fall)</b> Six further credit hours in Computer Science courses [see Note 4.] Nine further credit hours in Economics courses [see Note 3.]
<b>Work Term I (Spring)</b> Economics 299W	<b>Work Term III (Winter)</b> Economics 499W
<b>Term 3 (Fall)</b> Economics 4550 Six further credit hours in Economics courses [see Note 3.] Six credit hours in elective courses [see Note 2.]	<b>Term 6 (Spring)</b> Six further credit hours in Economics courses [see Note 3.] Nine credit hours in elective courses [see Note 2.]
<b>Term 4 (Winter)</b> Economics 3011 Economics 3551 Economics 4120 Economics 4551 Three further credit hours in Statistics courses [see Note 4.]	

- Notes: 1. Another 1000-level Computer Science course may be substituted for Computer Science 1700 with the approval of the Department Head.
2. Elective courses should be chosen with reference to the Regulations for the Honours Degree of Bachelor of Science, since courses specified for admission to and completion of the ECEO only partially satisfy these regulations. In particular note that (i) at least 90 credit hours in Science subjects are required and that (ii) at least three credit hours in an additional Science subject other than Mathematics/Statistics, Economics and Computer Science must be included in these Science courses.
3. Twenty-one credit hours in electives in Economics shall be chosen in consultation with the Head of Department or delegate, including at least 6 credit hours in courses at the 4000-level. In addition, all Economics Honours candidates are required to write an essay.
4. the Statistics and Computer Science elective courses may both be taken in either Term 4 or 5.

## 6.8.9 Course List

In accordance with Senate's *Policy Regarding Inactive Courses*, the course descriptions for courses which have not been offered in the previous three academic years and which are not scheduled to be offered in the current academic year have been removed from the following listing. For information about any of these inactive courses, please contact the Head of the Department.

Note: 2010 and 2020 are prerequisites for all advanced courses in Economics. Either course may be taken for semester credit by those intending to complete only 3 credit hours in Economics.

**2010 Introduction to Microeconomics I** examines scarcity and opportunity cost. Demand and supply. Elasticity. Household demand: marginal utility. Household demand: indifference curves. Production functions. Short-run and long-run cost functions. Perfect competition in the short run and the long run. Monopoly.

**2015 Introduction to Microeconomics II** - inactive course.

**2020 Introduction to Macroeconomics** covers national income accounting, aggregate income analysis, money, banking and foreign trade.

**2070 The Structure and Problems of the Newfoundland Economy** - inactive course.

**2550 Economic Statistics and Data Analysis** is an analysis of economic statistics and the use of economic data. A course designed to introduce students to the task of economic data collection, description and analysis. Emphasis will be on interpretation and analysis of data using computer software programs.

Prerequisite: Statistics 2500 or equivalent.

**3000 Intermediate Micro Theory I** is the basic microeconomic theory course; consumer demand, indifference curve analysis, theory of production and cost, factor substitution, and the theory of the firm under perfect competition and monopoly.

**3001 Intermediate Micro Theory II** is a continuation of basic microeconomic theory; the theory of imperfect competition, theory of factor pricing under various market structures, general equilibrium and welfare economics.

Prerequisite: Economics 3000.

**3010 Intermediate Macro Theory I** is aggregate analysis including consumer, investment, government and international sectors, the role of money, determinants of aggregate supply, and the effects of autonomous behavioural changes and fiscal and monetary policies on unemployment, price levels and the balance of payments.

**3011 Intermediate Macro Theory II** is a consideration of modern theories of macroeconomics, dynamics, empirical evidence and simulation of the national economy. Emphasis on the availability and effectiveness of government policy instruments.

Prerequisite: Economics 3010.

**3030 International Economics - Issues and Problems in a Canadian Context** is an intermediate course in international economics. The course covers the theory of comparative advantage, the structure and policy issues of the Canadian balance of payments, the foreign exchange market and the institutional aspects of international commerce.

**3070 The Structure and Problems of the Newfoundland Economy** is an analysis of the structure of the economy of Newfoundland. Basic economic theory will be applied to current economic issues and problems in Newfoundland.

**3080 Natural Resource and Environmental Economics** is application of economic analysis to renewable and nonrenewable natural resource industries such as the fishery, forestry, and mining. Emphasis is given to the criteria for optimal resource use under various market structures and their implications for public policy. Issues of environmental resource management and pollution control will also be covered.

**3140 Economic Analysis in Health Care** - inactive course.

**3150 Money and Banking** examines the operation of the money and banking system, with special emphasis on Canadian problems. Monetary theory will be treated in relation to income theory and foreign trade.

**3360 Labour Market Economics** is an intermediate course concentrating on Canadian labour issues. The course investigates the labour market decisions that workers face and the influence of government decisions. Course topics also include factors affecting a firm's demand for labour, wage determination in non-union market, the role of unions, the various structure of wages and wage differentials in the Canadian setting.

Note: Students who have completed the former Economics 4360 may not receive credit for Economics 3360.

**3550 Mathematical Economics I** examines linear algebra and differential calculus, with applications to economics.

Prerequisite: Mathematics 1000 or equivalent with a "B" standing, or Mathematics 2050.

**3551 Mathematical Economics II** covers integral calculus, difference and differential equations, with applications to Economics.

Prerequisite: Economics 3550.

**3600 Industrial Revolutions of the 18th and 19th Centuries** - inactive course.

**3610 International Economic History of the 19th and 20th Centuries** - inactive course.

**3620 Canadian Economic History to the End of the 19th Century** - inactive course.

**3630 Canadian Economic History in the 20th Century** - inactive course.

**3711 Intergovernmental Relations** (same as Political Science 3711)

**4000 Advanced Microeconomic Analysis** is an advanced treatment of theoretical and applied microeconomic theory, including topics such as intertemporal choice, risk and information, game theory and competitive strategy, index numbers, public goods, externalities, input-output analysis, linear programming, duality theory and empirical microeconomic studies.

Prerequisite: Economics 3001.

**4010 Economics of Development in Less Developed Countries** is a problem and policy approach to the economics of development, with emphasis on the issues of poverty, inequality and unemployment. General economic principles, theories and models are examined in the context of less developed economies, and global, institutional and structural implications are drawn.

**4011 Economic Planning and Development** - inactive course.

**4025 Public Expenditure** is an analysis of the theory of public expenditure. Relationship to resource allocation and distribution of income. Market failure and the rationale for government intervention. Theory of public goods. Public choice mechanisms. Expenditure patterns in Canada. Public sector budgeting. Public enterprise pricing and investment rules. Introduction to cost-benefit analysis.

Note: Credit may not be obtained for both Economics 4020 and Economics 4025.

**4026 Taxation** is an analysis of the theory of taxation. Relationship to resource allocation and distribution of income. Incentive effects of taxation. Tax incidence. Tax structure in Canada at federal, provincial and local levels.

Note: Credit may not be obtained for both Economics 4020 and Economics 4026.

**4030 International Trade** covers pure theory of trade, commercial policy, price discrimination and cartels, commercial policy for developing countries and the customs union.

**4031 International Monetary Problems** is an advanced course in open economy macroeconomics covering balance of payments adjustment under fixed and flexible exchange rates; exchange rate movements and capital movements; the international monetary system; interdependence in the world economy.

**4040 Economics of Education** - inactive course.

**4050 Inflation: Theory and Policy** - inactive course.

**4060 Development of Economic Thought I** - inactive course.

**4061 Development of Economic Thought II** - inactive course.

**4070 Forestry Economics** is an examination of the theoretical and empirical literature on the economics of forest use.

**4080 Advanced Fisheries Economics** is an examination of advanced theoretical and empirical studies of economic problems associated with prosecuting fisheries resources.

**4085 Advanced Environmental Economics** is an advanced treatment of the environmental consequences of economic activities and the associated policy issues.

**4090 Mineral and Petroleum Economics** is an introduction to some of the theoretical economic problems and practical solutions involved in the exploration, development and production phases of mineral and petroleum mining in Newfoundland and Labrador.

**4100 Industrial Organization and Public Policy** is the study of the basic characteristics of structure, behaviour and performance of industry with particular reference to the Canadian economy. Relation of industrial structure to social purpose is examined, with an emphasis on public regulations of monopoly and the objectives and implementation of anti-combines policy.

**4120 Applied Welfare Economics and Cost Benefit Analysis** investigates some current criteria of welfare theory found in the literature and then outlines the principles used in measuring changes in consumer and producer welfare. The theory of cost benefit analysis is examined and then the principles are applied to a variety of projects, some of which are proposed to take place in Newfoundland and Labrador.

**4140 Health Economics** - inactive course.

**4150 Monetary Theory** examines empirical studies in money. Readings in current literature. Monetary theory with applications to problems of employment and foreign trade.



**4361 Labour Market Theory and Income Distribution** - inactive course.

**4450 Econometrics I** covers estimation of the general linear regression model with emphasis on fundamental theory and examples from published empirical research.

**4451 Econometrics II** covers further problems in econometric theory and technique: multicollinearity, autocorrelation, nonlinear estimation, and the identification and estimation of systems of equations. Published empirical research will be discussed and each student will be expected to perform an original empirical study.  
Prerequisite: Economics 4450.

**4999 Honours Essay**

### 6.8.9.1 Work Term Descriptions

The following Work Terms are a requirement of the Bachelor of Arts and Bachelor of Science Co-operative Education Option only.

**299W Work Term I** follows the successful completion of Academic Term 2. For most students, it represents their first work experience in a professional environment and as such represents their first opportunity to evaluate their choice of pursuing a career in Economics. Students are expected to learn, develop and practice the high standards of behaviour and performance normally expected in the work environment. (A detailed description of each job is normally posted during the job competition.)

As one component of the Work Term, the student is required to complete a work report. The work report, as a minimum requirement should

1. include a description of the project including the objectives, goals and duties of the student. It should also include a history of student's activities and accomplishments with the employer
2. analyze an issue/problem related to the student's work environment.
3. demonstrate an understanding of the structure of a professional report, and show reasonable competence in written communication and presentation skills. (Students should consult the evaluation form provided in the placement package.)

Late reports will not be graded unless prior permission for a late report has been given by the co-ordinator.

Note: *Seminars on professional development, conducted by the CESC, are presented during Academic Term 2 to introduce and prepare the student for participation in the subsequent work terms. Topics may include, among others, work term evaluation, work report writing, career planning employment seeking skills, resume preparation, self-*

*employment, ethics and professional concepts, behavioural requirements in the work place, assertiveness in the work place and industrial safety.*

**399W Work Term II** follows the successful completion of Academic Term 4. Students are expected to further develop and expand their knowledge and work-related skills and should be able to accept increased responsibility and challenge. In addition, students are expected to demonstrate an ability to deal with increasingly complex work-related concepts and problems.

The Work Report, as a minimum requirement should

1. include a description of the project including the objectives, goals and duties of the student. It should also include a history of student's activities and accomplishments with the employer
2. analyze an issue problem related to the student's work environment and demonstrate an understanding of practical application of concepts relative to the student's academic background
3. demonstrate competence in creating a professional report, and
4. show competence in written communication and presentation skills.

Late reports will not be graded unless prior permission for a late report has been given by the co-ordinator.

**499W Work Term III** follows the successful completion of Academic Term 5. Students should have sufficient academic grounding and work experience to contribute in a positive manner to the problem-solving and management processes needed and practiced in the work environment. Students should become better acquainted with their discipline of study, should observe and appreciate the attitudes, responsibilities, and ethics normally expected of professionals and should exercise greater independence and responsibility in their assigned work functions.

The Work Report should reflect the growing professional development of the student and, as a minimum requirement, will

1. include a description of the project including the objectives, goals and duties of the student. It should also include a history of student's activities and accomplishments with the employer
2. demonstrate an increased ability to analyze a significant issue/ problem related to the student's experience in the work environment
3. demonstrate a high level of competence in producing a professional report, and
4. show a high level of competence in written communication and presentation skills.

Late reports will not be graded unless prior permission for a late report has been given by the co-ordinator.

## 6.9 English Language and Literature

### 6.9.1 General Degree

1. One of English 1000, 1050, 1080, the former 1100 AND one of English 1001, 1051, 1101, 1102, 1103, 1110 are prerequisites for all other courses. In the case of students whose first language is not English and who take 1020 or 1030, that course and one of English 1000, 1001, 1021, 1050, 1051, 1080, 1101, 1102, 1103 or the former 1100 are prerequisites for all other courses.
2. Students who choose English as their Major must include 36 credit hours in courses in the subject, including:
  - a. English 2000 and 2001;
  - b. English 2390;
  - c. English 3200 or 3201;
  - d. Three credit hours in Canadian literature;
  - e. Three credit hours in American literature;
  - f. Six credit hours at the 4000-level\*;
  - g. Six credit hours in additional English courses.

\*These 6 credit hours may not be chosen from courses conducted by another Department.

3. In addition to the general major defined in 2. above, students may take a specialization in theatre/drama within the English major. Admission to this specialization is by application only, and application may be made only after English 2002 has been completed. Normally students will apply for admission at the end of their second year. Application forms are available from the Department.

In this specialization, students must complete 39 credit hours in courses as follows:

- a. Six credit hours in English courses at the first-year level (see Clause 1. above).
  - b. English 2000, 2002, 2390, 3350, 3351, 4400, 4401;
  - c. Three credit hours in one of 3200, 3201;
  - d. Three credit hours in one of 4300, 4301;
  - e. Three credit hours in one of English 3156, 3171, 3260 or 4302;
  - f. Three credit hours in one of English 3021, 3022, 3181, or 3302;
  4. In addition to the general major defined in 2. above students may take a specialization in language within the English major. In this specialization students must complete 42 credit hours in courses as follows :
    - a. Six credit hours in courses at the first-year level (see Clause 1. above).
    - b. English 2000, 2400, 2401;
    - c. Three credit hours in one of 2390, 3651;
    - d. Three credit hours in one of 3200, 3201;
    - e. At least 21 credit hours chosen from the following courses, of which at least two courses shall have an initial digit "3" and at least two courses an initial digit "4": 2600, 2601, 3500, 3501, 3650, 3651, 3700, 3814, 4403, 4420, 4421, 4500, 4501, 4600, and 4601.
- Students in this specialization are advised to take 2390 before 3650 and to take 2400 before 2401.

5. Students who choose English as their minor must complete at least 24 credit hours in the subject. These must include:
  - a. One of English 2002, 2003, 2004, 2120, 2121, 2210, 2211, 2212, 2213, 2214, 2811;
  - b. English 2390;
  - c. One of English 3200 or 3201;
  - d. Three credit hours in Canadian literature;
  - e. Six credit hours in additional English courses.

*Note: At least 6 credit hours must be at the 3000-level.*

Requirements for the minor may not be chosen from courses conducted by another Department (e.g., English 3110, 3111).
6. No student shall register in any course having an initial digit "3" unless he/she has successfully completed at least 6 credit hours in courses having an initial digit "2".
7. No student shall register in any course having an initial digit "4" unless he/she has successfully completed at least 6 credit hours in courses having an initial digit "3".
8. English 3395 (Grenfell College) will be accepted as a substitute for English 2390 for fulfilling the requirements of the English major.
9. The programs at the Sir Wilfred Grenfell College contain some courses that are not available in St. John's. Hence, students wishing to transfer from the St. John's campus to Grenfell College may have difficulty in completing their program in a timely fashion.

### 6.9.2 Honours Degree With English as Major Subject

1. Courses will be chosen in consultation with the Head of Department.
2. Students who choose to complete an Honours in English must complete 60 credit hours in the subject, including:
  - a. English 2000 and 2001;
  - b. English 2390;
  - c. One of English 3200 or 3201;
  - d. Three credit hours in Canadian literature;
  - e. Three credit hours in American literature;
  - f. English 4100 and 4101;
  - g. English 4900;
  - h. Three credit hours in pre- 19th century literature (excluding 3200 and 3201);
  - i. Three credit hours in 19th century literature;
  - j. Three credit hours in 20th century literature;
  - k. Two of 2600, 2601, 3500, 3501, 3600;
  - l. Nine credit hours in additional English courses;
  - m. English 4999.

*Note: At least 36 of the 60 credit hours required must be in English courses at the 3000-level or above. Courses at the 4000-level may not be chosen from those conducted by another department.*
3. In their final year, all Honours candidates are required to present an Honours Essay (4999); the topic of the Honours Essay is to be approved by the Head.
4. English 3395 (Grenfell College) will be accepted as a substitute for English 2390 for fulfilling the requirements of the English Honours degree.

### 6.9.3 Joint Honours Degree in English and Another Major Subject

1. See General Regulations for Honours Degree.
2. Candidates shall complete at least 39 credit hours in courses in English beyond the first-year; and a student's program must be approved by the Head of the Department and conform to the General Regulations for Joint Honours degrees.
3. The 39 credit hours shall include:
  - a. English 2000 and 2001;
  - b. English 2390;
  - c. One of English 3200 or 3201;
  - d. Three credit hours in Canadian literature;
  - e. English 4100 and 4101;
  - f. English 4900;
  - g. Three credit hours in pre- 19th century literature (excluding 3200/3201);
  - h. Three credit hours in 19th century literature;
  - i. Three credit hours in 20th century literature;
  - j. Six credit hours in additional English courses at the 4000-level.

*Note: At least 27 of the 39 credit hours in English beyond the first-year must be at the 3000-level or above.*

### 6.9.4 Course List

In accordance with Senate's *Policy Regarding Inactive Courses*, the course descriptions for courses which have not been offered in the previous three academic years and which are not scheduled to be offered in the current academic year have been removed from the following listing. For information about any of these inactive courses, please contact the Head of the Department.

Some sections of English 2000, 2001, 2002, 2010, 2020, 2211, 2214 and 3817 may qualify as Research/Writing courses for the

B.A. Core requirements. Consult each semester's Registration Booklet for the R/W designation.

- Notes:
1. Lists of texts and readings for courses may be obtained from the Secretary of the Department of English.
  2. Courses for which there is insufficient demand will not be given.
  3. English 1000, 1050, 1080, and the former 1100 are courses for students who have attained a standard in Level III English acceptable to the Department.
  4. English 1050 and 1051 are courses for students who have completed Level III English at a level of attainment acceptable to the Department.

5. *English 1020 is a course for students whose first language is not English and who have passed 102F or have attained a standard acceptable to the Department on the English Placement Test.*
6. *English 1001, 1051, 1101, 1102, 1103, 1110 are courses which may be taken by students who have successfully completed 1000, 1050, 1080 or the former 1100. English 1000, 1001, 1050, 1051, 1080, 1101, 1102, 1103, or the former 1100 are courses which may be taken by students who have successfully completed 1020 or 1030.*
7. *Students cannot receive credit for more than one of English 1000, 1050, 1080, 1100 or for more than one of 1001, 1051, 1101, 1102, 1103, 1110.*
8. *Students cannot receive credit for both English 1020 or 1030 and English 1110, nor can they receive credit for both English 1110 and English 2010.*
9. *A student may not receive credit for more than 6 credit hours in first-year courses in English (this includes unspecified first-year transfer credits).*
10. *Students who have passed 1020 may take as their second English course one of 1021, 1080, 1101, 1102, or 1103.*

**100C Survey of the English Language I** - inactive course.

**101C Survey of the English Language II** - inactive course.

**102C Survey of the English Language III** - inactive course.

**102F Foundation English** is a non-credit course designed for students whose first language is other than English and whose knowledge and use of English do not meet the standards for entry into the regular first-year English courses.

Lectures: Four hours per week plus one hour conversation class.  
Laboratory: One hour per week.

**103C Survey of the English Language IV** - inactive course.

**1020 Writing for Second Language Students I** is an introduction to the use of English with emphasis on composition for non-native English-speaking students.

Lectures: Three hours per week.

Note: *Admission to English 1020 will be determined on the basis of the departmental English Placement Test or successful completion of English 102F.*

**1021 Writing for Second Language Students II** develops skills in critical reading and writing of academic English, with emphasis on research and writing syntheses from sources, for non-native English-speaking students.

Lectures: Three hours per week.

Prerequisite: English 1020.

**1030 Writing** - inactive course.

**1031 Prose Literature** - inactive course.

**1080 Critical Reading and Writing I** is an introduction to such literary forms as poetry, short fiction, drama, and the essay. Emphasis is placed on critical reading and writing: analysing texts, framing and using questions, constructing essays, organizing paragraphs, quoting and documenting, revising and editing.

Lectures: Three hours per week.

Note: *Credit will not be given for both 1080, and 1000, 1050 or the former 1100.*

**1101 Critical Reading and Writing II (Fiction)** is a study of such forms as the novel, the novella, the story sequence. Emphasis is placed on critical reading and writing: analysing texts, framing and using questions, constructing essays, organizing paragraphs, conducting research, quoting and documenting, revising and editing.

Lectures: Three hours per week.

Prerequisite: English 1000 or 1020 or 1030 or 1050 or 1080 or the former 1100.

**1102 Critical Reading and Writing II (Drama)** is a study of drama. Emphasis is placed on critical reading and writing: analysing texts, framing and using questions, constructing essays, organizing paragraphs, conducting research, quoting and documenting, revising and editing.

Lectures: Three hours per week.

Prerequisite: English 1000 or 1020 or 1030 or 1050 or 1080 or the former 1100.

Note: *English 1102 may not be used instead of English 2002 as a prerequisite for entry into the Theatre-Drama specialization within the Major.*

**1103 Critical Reading and Writing II (Poetry)** is a study of poetry. Emphasis is placed on critical reading and writing: analysing texts, framing and using questions, constructing essays, organizing paragraphs, conducting research, quoting and documenting, revising and editing.

Lectures: Three hours per week.

Prerequisite: English 1000 or 1020 or 1030 or 1050 or 1080 or the former 1100.

**1110 Critical Reading and Writing II (Context, Substance, Style)** is an examination of prose texts such as essays, articles and reviews. Students write for different purposes and audiences. Emphasis is placed on critical reading and writing: analysing texts, framing and using questions, constructing essays, organizing paragraphs, conducting research, quoting and documenting, revising and editing.

Prerequisite: English 1000 or 1050 or 1080 or the former 1100.

Lectures: Three hours per week.

Notes: 1. *Students cannot receive credit for both 1110 and 2010.*

2. *Students cannot receive credit for both English 1020 and 1110, nor for both 1030 and 1110.*

**2000 Major Writers to 1800** is an introduction to the work of major authors by detailed study of selected texts. There is an emphasis on the various skills of essay writing.

Note: *Students can receive credit for only one of English 2000, 2005, and 2110.*

**2001 Major Writers from 1800** is an introduction to the work of major authors by detailed study of selected texts. There is an emphasis on the various skills of essay writing.

Note: *Students can receive credit for only one of English 2001, 2007, and 2111.*

**2002 Drama** is a survey of drama from the Greeks to the present day.

Note: *Students can receive credit for only one of English 2002 and 2350.*

**2003 Poetry** is a study of poetry, which aims to increase the student's critical understanding and appreciation of poetry, conducted through an examination of a wide variety of kinds and techniques.

**2004 Short Fiction** is a study of short fiction which aims to give the student an appreciation of the short story as a literary form. The course will deal with the nature, history and development of short fiction by considering a variety of authors and stories.

**2010 Comprehension, Writing and Prose Style I** emphasizes the development of (a) the capacity to understand and appreciate the varieties of prose through close analysis of a wide range of examples, and (b) the ability to write expository and other kinds of prose.

Note: *This course may not be taken for credit by students who have completed English 1110.*

**2013 Twentieth Century Musicals** (same as Music 2013) is a survey of twentieth-century musical theatre. Selected works, presenting different styles and periods, will be examined in detail. There will be a strong, required listening/viewing component to this course. The ability to read music is not required. Music 2013 cannot be taken for credit by students enrolled in the Bachelor of Music program.

Notes: 1. *Credit for this course may not be applied to the Bachelor of Music degree.*

2. *Credit can be received for only one of English 2013, Music 3007, or Music 2013.*

**2020 Comprehension, Writing and Prose Style II** - inactive course.

**2030 Comprehension, Writing and Prose Style** - inactive course.

**2031 Modern Canadian Fiction** - inactive course.

**2110 Survey of English Literature I** - inactive course.

**2111 Survey of English Literature II** - inactive course.

**2120 Introduction to Tragedy** introduces students to the theory, forms and strategies of tragedy through a selection of works in English. The course emphasizes the teaching of various skills of research and essay writing, including the principles of documentation. This course qualifies as a Research/Writing course.

**2121 Introduction to Comedy** - inactive course.

**2122 Introduction to World Literature in English** introduces students to the significant body of literature written in English that stands outside the dominant British/North American canon. The course emphasizes the teaching of various skills of research and essay writing including principles of documentation. Students will be required to complete a major research project and to write several shorter essays. This course qualifies as a Research/Writing course.

**2150 Modern Canadian Fiction** is a study of representative Canadian fiction since 1930, including such authors as Ross, Buckler, Davies, Laurence, Atwood, Ondaatje and Findley.

**2151 New Canadian Fiction** is a study of fiction of Canadian writers since the 1970s.

**2160 North American Aboriginal Literature** will introduce aboriginal literature in a social, political and historical context. Beginning with the oral tradition (songs, narratives, legends, and orations), it will focus on different works by North American aboriginal writers: poetry, drama, short stories and novels.

**2210 The English Novel to 1800** - inactive course.

**2211 The English Novel from 1800-1900** is a study of representative English novels of the nineteenth century including works by such authors as Austen, the Brontës, Dickens, Thackeray, Gaskell, Eliot, Trollope and Hardy. Note: *This course may not be taken for credit by students who have completed English 2200.*

**2212 The Twentieth-Century British Novel** is a study of representative British novels of the twentieth century, including works by such authors as Conrad, Forster, Joyce, Lawrence, Woolf, Waugh, Lessing and Murdoch.

Note: *This course may not be taken for credit by students who have completed English 2201.*

**2213 The Twentieth-Century American Novel** is a study of representative American novels of the twentieth century, including such authors as James, Dreiser, Fitzgerald, Hemingway, Faulkner, Hurston, Morrison, Pynchon, DeLillo and Silko.

Note: *This course may not be taken for credit by students who have completed English 2201.*

**2214 Nineteenth-Century American Fiction** is a study of representative American fiction of the nineteenth century including works by such authors as Poe, Hawthorne, Melville, Stowe, Twain and Chopin.

Note: *Students can receive credit for only one of English 2214 and 2215.*

**2250 Drama: Structure, Form and Practice** - inactive course.

**2390 Introduction to Modern English Structures** is a practical introduction to the descriptive study of the English language with emphasis on syntax.

**2400 History of the English Language to 1500** (same as Linguistics 2400) is a study of the early stages of the English Language: the Indo-European background; pronunciation and spelling, grammar, vocabulary and meaning in Old and Middle English.

Prerequisite: English 2390 or Linguistics 2103

**2401 History of the English Language from 1500 to Modern Times** - inactive course.

**2600 Introduction to Middle English** - inactive course.

**2601 Introduction to Early Middle English** - inactive course.

**2700 Writing and Gender I** requires students to investigate the construction of gender in a variety of fiction and non-fiction works, through journals, critical analysis, web discussion, presentations for peers on the themes of the course, and original fiction and non-fiction. Students will be expected to share most of their work with their peers. This course qualifies as a research and writing course.

**2811 Science Fiction and Fantasy** introduces the literary sub-genres of science fiction and fantasy. It examines the traditional canonical backgrounds from which popular literatures derive, studies the formulaic patterns and explores the place of science fiction and fantasy in popular culture.

**2812-2820 Special Topics**

**3001 Satire** is a study of satire from classical times, examining major forms of satiric expression such as the monologue, the parody and the long narrative.

**3002 Medieval Books** (same as Medieval Studies 3000, History 3000, Religious Studies 3000) is an examination of the development and role of the manuscript book during the Middle Ages. Topics covered will include book production and dissemination; authors, scribes and audiences; and various kinds of books (e.g. glossed Bibles, anthologies, books of hours, etc.) and their uses.

Prerequisite: Medieval Studies 2000, 2001 or 2002 or permission of the instructor.

**3003 English Studies** - inactive course.

**3006 Women Writers in the Middle Ages** (same as Medieval Studies 3006 and Women's Studies 3001) will study selections from the considerable corpus of women's writings in the Medieval period, as well as issues which affected women's writing. All selections will be read in English translation.

**3021 English Drama to 1580** - inactive course.

**3022 Drama 1580-1642** is a study of the development of English drama (excluding Shakespeare) from 1580 to 1642.

Note: *Students can receive credit for only one of English 3022 and 4317.*

**3100 Practical Criticism** is a study of poetry through close reading and analysis to reveal meaning, methods, tone and technique.

**3105 Issues in the Acquisition of English and the Adult Learner** (same as Linguistics 3105) focuses on selected issues in the grammatical, lexical, and pragmatic components of adult-learner English. Techniques of contrastive analysis, error analysis, performance analysis, and discourse analysis of corpora from adult English learners are presented and practised. Prerequisites: English 2390, 3650; Linguistics 2104; Education 2222; English 2010 is recommended.

**3120 Tragedy** - inactive course.

**3121 Comedy** - inactive course.

**3152 Canadian Literature to 1918** is a study of the development of Canadian literature from its beginnings to the end of World War I.

Note: *This course may not be taken for credit by students who have completed English 3145, 3147, or 3150.*

**3153 Canadian Literature, 1918-1945** - inactive course.

**3155 Newfoundland Literature** is a study of Newfoundland literature with emphasis on representative writers since 1900.

Note: *Students can receive credit for only one of English 2155 and 3155.*

**3156 Modern Canadian Drama** is a study of a number of representative plays which illustrate the development of modern drama and theatre in Canada.

Note: *Students can receive credit for only one of English 3156 and 4307.*

**3157 Canadian Literature 1945-1970** is a study of the development of Canadian literature from 1945 to 1970.

Note: *This course may not be taken for credit by students who have completed English 3146, 3148, 3151, or 3154.*

**3158 Canadian Literature 1970 to the Present** is a study of recent developments in Canadian literature.

Note: *This course may not be taken for credit by students who have completed English 3146, 3148, 3151, or 3154.*

**3160 Post-Colonial Literature I** - inactive course.

**3161 Post-Colonial Literature II** is a study of selected authors of the West Indies, Africa and the Indian sub-continent.

**3171 Anglo-Irish Drama** is a study of representative Anglo-Irish drama by such authors as Wilde, Shaw, Yeats, Synge, Lady Gregory, O'Casey, Behan, Friel and Molloy.

Note: *This course may not be taken for credit by students who have completed English 3170 or 3180.*

**3172 Anglo-Irish Poetry** - inactive course.

**3173 Anglo-Irish Prose** is a study of representative Anglo-Irish prose by such authors as Swift, Edgeworth, Stephens, Yeats, O'Casey, Joyce, Behan, Lavin, O'Connor, O'Flaherty and Moore.

Note: *This course may not be taken for credit by students who have completed English 3170 or 4190.*

**3181 Drama of the Restoration and Eighteenth Century** - inactive course.

**3190 Scottish Literature** is a study of representative Scottish poetry and prose from the mid-eighteenth to the twentieth century including selected works by such writers as Boswell, Burns, Hogg, Scott, Galt, Stevenson, Conan Doyle, Buchan, MacDiarmid, Garioch and Muriel Spark.

**3200 Shakespeare** is a study of six tragedies and romances such as Romeo and Juliet, Julius Caesar, Hamlet, Othello, King Lear, Antony and Cleopatra, Macbeth, The Winter's Tale, The Tempest.

**3201 Shakespeare** is a study of six comedies and histories such as Love's Labour's Lost, The Taming of the Shrew, A Midsummer Night's Dream, The Merchant of Venice, Much Ado About Nothing, As You Like It, Twelfth Night, Measure for Measure, 1 Henry IV, 2 Henry IV, Henry V.

**3260 American Drama** is a study of works by dramatists such as O'Neill, Rice, Maxwell Anderson, Sherwood, Williams, Hellman, Odets, Saroyan, Inge, Miller, Albee, Wilder and Kopit.

Note: *Students can receive credit for only one of English 3260 and 4308.*

**3302 Nineteenth-Century Drama** - inactive course.

**3333 English Literature and Medical Humanities** focuses on the human condition and explores our biological, psychological and spiritual journeys of pain, suffering and death as revealed through literary texts. These texts vary among the literary genres of poetry, short stories, drama, novels, etc.

**3350 Theatre** is an introduction to principles of directing and acting, through lectures, discussion and stage production.

Three hours of lectures.

Three hours of workshops.

**3351 The Physical Stage and Video Technique** is an introduction to the fundamentals and vocabulary of design, lighting and stagecraft and film/video craft, including sound, properties, etc.

**3460 Folklore and Literature** (same as Folklore 3460) will examine the interrelationships among folklore forms and literary genres, the influence of oral traditions on written literatures, and consider the theoretical issues raised by these interrelationships. The primary emphasis will be on the interpretation of literature from the perspective of folk tradition. Extensive reading, oral and written reports will be required.

Note: *Credit may not be obtained for both English/Folklore 3460 and the former English/Folklore 4450.*

**3500 Old English Language and Poetry** introduces students to the basic elements of Old English grammar and vocabulary through the practice of translating one or more poems from Old English into modern English and the study of the Old English poetic corpus in modern translations.

Notes: 1. *It is strongly recommended that students complete English 2390 prior to taking this course.*

2. *Students who have completed English 250A/B cannot receive credit for either English 3500 or English 3501.*

**3501 Old English Language and Prose** introduces students to the basic elements of Old English grammar and vocabulary through the practice of translating one or more prose texts from Old English into modern English and the study of selected Old English prose texts in modern English translations.

Notes: 1. *It is strongly recommended that students complete English 2390 prior to taking this course.*

2. *Students who have completed English 250A/B cannot receive credit for either English 3500 or English 3501.*

**3600 Chaucer** is a study of representative poems.

**3650 Structure of Modern English: Phonology and Morphology** is a study of standard English pronunciation and regional variations; stress intonation, terminal junctures; inflectional and derivational morphology. Informal speech and written English are compared.

**3651 Structure of Modern English: Syntax** - inactive course.

**3700 Introduction to Old Norse** - inactive course.

**3710-3729 Special Topics in English (available only as part of the Harlow Campus Semester)**

**3811-3820 (Excluding 3813, 3816 and 3817) Special Topics**

**3813 Film Studies** is an introduction to the study of narrative feature film with an emphasis on the history of the industry, the evolution of different genres, the influence of national cinemas and the role of major directors in the development of the medium.

**3816 Television** is an introduction to the principles of acting for the camera through lecture, discussion and studio work.

Prerequisites: English 3350 and 3351.

Note: *Admission priority will be given to students in Diploma in Performance and Communications Media.*

**3817 Writing and Gender II** explores differences related to gender in a wide variety of writing, not only in texts, but also in their production, reception and functions. All students are required to keep a journal, to share some of their writing with the class, and to participate in class discussions.

**3830 Women Writers** is a course setting women writers in the context of literary history.

Note: *Students can receive credit for only one of English 2805, 3810, and 3830.*

**3840-3870 Special Topics**

**3900 Introduction to Creative Writing: Fiction** is conducted as a seminar using models of contemporary writing and the students' own work. Each student will be required to submit work regularly.

Notes: 1. *Students can receive credit for only two of English 3900, 3901, and 3905.*

2. *Normally, admission to this course will be based on the instructor's evaluation of the student's writing. Class size will be limited.*

**3901 Introduction to Creative Writing: Poetry** is conducted as a seminar using models of contemporary writing and the students' own work. Each student will be required to submit work regularly.

Notes: 1. *Students can receive credit for only two of English 3900, 3901, and 3905.*

2. *Normally, admission to this course will be based on the instructor's evaluation of the student's writing. Class size will be limited.*

**3902 Introduction to Creative Writing: Playwriting** is conducted as a seminar using models of contemporary dramatic writing and the students' own work. Each student will be required to submit work regularly.

Prerequisites: The regular prerequisites for 3000-level offerings, plus submission of a portfolio specified by the instructor and permission of the instructor.

Note: *Students can receive credit for only one of English 3902 and the former English 3842.*

**3903 Introduction to Creative Writing: Nonfiction** is conducted as a seminar using models of contemporary writing and the students' own work. Each student will be required to submit work regularly.

Prerequisites: The regular prerequisites for 3000-level offerings, plus the submission of a portfolio specified by the instructor and permission of the instructor.

**3910 Investigative Writing** will permit students to learn to draft and edit short investigative pieces; and they complete an article or essay, and an investigative project that attends to ethics guidelines, research, documentation, interviewing protocols, and writing and editing for a specific context. The course is conducted as a seminar using the students' own work. Each student will be required to submit work regularly. Some work may be done collaboratively.

Prerequisites/Co-requisites: Normally, admission to this course will be based on the instructor's evaluation of the student's writing. Class size will be limited.

**3920 Reviewing** permits students to analyze and practice reviewing of three kinds: (a) performance; (b) film, TV video; (c) books.

Prerequisites/Co-requisites: Normally, admission to this course will be based on the instructor's evaluation of the student's writing. Class size will be limited.

**4000 English Literature and History of Ideas I** is a study of European thought and culture as they affect the history and development of English literature from the Middle Ages to the eighteenth century.

Note: *This course may not be taken for credit by students who have completed English 400A and 400B.*

**4001 English Literature and the History of Ideas II** - inactive course.

**4010 Literature, 1485-1600: Prose and Poetry** is a study of the literature of the English Renaissance, including Tudor humanism, Elizabethan prose fiction, and such writers as Wyatt, Surrey, Sidney and Spenser.

**4030 British Literature, 1600-1660** is a study of selected works by such authors as Bacon, Donne, Jonson, Overbury, Browne, Herbert, Burton, Walton, Vaughan and the Cavalier poets.

**4031 British Literature 1660-1700** is a study of selected works by such authors as Milton, Marvell, Clarendon, Bunyan, Evelyn, Pepys, Behn and Dryden.

**4040 British Literature, 1700-1750** is a study of selected works by such representative authors as Addison, Steele, Defoe, Swift, Shaftesbury, Pope, Thomson and Young.

**4041 British Literature, 1750-1790** is a study of selected works by such representative authors as Burke, Johnson, Boswell, Walpole, Gray, Collins, Cowper, Smart, Chatterton, Goldsmith and Sheridan.

Note: *Neither English 4040 nor 4041 may be taken for credit by students who completed English 404A and 404B.*

**4050 British Literature, 1790-1830** is a study of selected works of Blake, Wordsworth, Coleridge and Hazlitt.

**4051 British Literature, 1790-1830** is a study of selected works of Byron, Shelley, Keats, Lamb and De Quincey.

Note: *Neither English 4050 nor 4051 may be taken for credit by students who completed English 405A and 405B.*

**4060 Victorian Literature I** - inactive course.

**4061 Victorian Literature II** is a study of selected works by such writers as Dickens, Thackeray, Gaskell, George Eliot, Meredith, Trollope, and the Rossetts.

**4070 British Literature, 1890-1920** is a study of representative writers such as Hardy, Wilde, Conrad, Housman, Forster, Edward Thomas, Owen, D. H. Lawrence, Mansfield, Virginia Woolf.

**4071 British Literature, 1920-1945** - inactive course.

**4080 British Literature since 1945** is a study of representative writers of the period, such as Larkin, Murdoch, Hughes, Jennings, Geoffrey Hill, Powell, Pinter, Kingsley Amis and Ishiguro.

**4100 Critical Theory I** is a survey of critical approaches to literature, from Plato to the end of the nineteenth century.

Note: *Students are advised to take this course towards the end of their program.*

**4101 Critical Theory II** is a survey of critical approaches to literature in the twentieth century.

Note: *Students can receive credit for only one of English 4101 and 4105. Students are advised to take this course towards the end of their program.*

**4210 Shakespeare's English History Plays** is a course for students who have completed English 3200 or 3201. Plays studied: King John, Richard II, Henry IV, Henry V, Henry VI, Richard III, Henry VIII.

Prerequisite: English 3200 or 3201.

Note: *Students can receive credit for only two of English 4210, 4211, and 4316.*

**4211 Shakespeare's Roman and Greek Plays** is a course for students who have completed English 3200 or 3201. Plays studied: Titus Andronicus, Julius Caesar, Antony and Cleopatra, Troilus and Cressida, Coriolanus, Timon of Athens, Pericles, Cymbeline.

Prerequisite: English 3200 or 3201.

Note: *Students can receive credit for only two of English 4210, 4211, and 4316.*

**4251 American Literature to 1880** is a course on representative fiction, prose and poetry, including works by such authors as Edwards, Cooper, Hawthorne, Melville, Thoreau, Emerson, Poe, Whitman and Dickinson.

**4260 American Literature from 1880 to 1928** traces the development of American literature from the closing of the frontier to the beginning of the Depression through the study of such writers as Adams, James, Crane, Dreiser, Cather, Robinson and Frost.

Note: *Students can receive credit for only three of English 3215, 4260, 4261, and 4270.*

**4261 American Literature from 1928 to 1945** concentrates on the study of American fiction, drama and poetry in the period between the two World Wars. The course includes such writers as Hemingway, Faulkner, Fitzgerald, O'Neill, Stevens, Cummings and Hart Crane.

Note: *Students can receive credit for only three of English 3215, 4260, 4261, and 4270.*

**4270 American Literature Since 1945** is a study of representative writers of the period, such as Stevens, Lowell, Wilbur, Plath, McCullers, Bellow, Malamud.

Note: *Students can receive credit for only three of English 3215, 4260, 4261, and 4270.*

**4300 Modern Drama I** examines drama from Ibsen to the present day, principally of the realistic tradition, studied through representative plays.

Prerequisite: English 2002 or permission of the Head of Department.

Note: *Students can receive credit for only one of English 3275 and 4300.*

**4301 Modern Drama II** - inactive course.

**4302 Contemporary British Drama** is a study of representative dramatic works of contemporary British drama.

**4400 Directing** is the analysis, production plans and execution of selected projects.

Prerequisites: English 3350 and 3351 or permission of the instructor, in consultation with the Head of the Department.

**4401 Producing the Play** is a full semester working with a selected play, to culminate in public performance. Students will be required to participate fully in all aspects of the production, except direction, which will be the responsibility of the instructor.

Prerequisites: English 3350 and 3351 or permission of the instructor, in consultation with the Head of the Department.

**4402 Producing the Documentary** is a full semester working on a selected project, to culminate in the creation of a completed video. Students, working in groups established by the Program Coordinator, will be required to participate in all aspects of production.

Prerequisites: English 3350, 3351 and 3816.

Note: *Admission priority will be given to students in Diploma in Performance and Communications Media.*

**4403 Etymology-History of English Words** - inactive course.

**4420 English Dialectology I** (same as Linguistics 4420) is scope and applications of dialect study; history of English dialects; standard versus non-standard varieties; development of dialect study, especially linguistic geography; non-standard dialect and literature.

**4421 English Dialectology II** (same as Linguistics 4421) is field-work and transcription; modern linguistic geography; structuralist dialectology; occupational dialects; other recent approaches.

Prerequisite: English 4420.

**4422 Stylistics** is a study of the main influences of language on literature. By far the most common kind of material studied is literary; attention is largely *text-centred*. The goal is not simply to describe the formal features of texts, but to show their functional significance for interpretation.

Prerequisites: English 2390 and two third-year courses in English literature.

**4500 Old English Language and Literature I** - inactive course.

**4501 Old English Language and Literature II** - inactive course.

**4600 Middle English Language and Literature I** is a study of such representative writers as Chaucer, Gower, Langland and the Gawain/Pearl poet.

**4601 Middle English Language and Literature II** - inactive course.

**4800 Spenser and Milton** - inactive course.

**4805 Blake** is a study of a selection of Blake's major writings.

**4810-4819 (Excluding 4817) Special Topics**

**4817 Utopias and Dystopias in Literature** is a study of representative literary utopias and dystopias, both classic and modern.

Prerequisite/Co-requisite: Two 3000-level English courses.

**4821 Canadian Literature in Context I** - inactive course.

**4822 Canadian Literature in Context II** - inactive course.

**4850-4860 Special Topics in Canadian Literature**

**4900 Bibliography I** is an introduction to methods needed for advanced study of English: aspects of literary detection; studies in the material form of the book, from sheep or tree to finished product; a guide to the editing of books.

**4901 Bibliography II** - inactive course.

**4910 Advanced Creative Writing: Fiction** is a seminar for students who wish to write publishable literary fiction. Class size will be limited. Students will be expected to produce at least 15,000 words during the semester. Regular participation is also required.

Prerequisites: Completion of English 3900 with a grade of 70 or higher *and* submission of a portfolio *and* permission of the instructor.

**4911 Advanced Creative Writing (Poetry)** uses models of contemporary writing and the students' own work, this course is designed to develop further the technical skill of those students who have reached a high level of achievement in the introductory creative writing course in poetry, English 3901 (or who have a body of work of exceptional accomplishment) and to help them move towards publication in literary journals and chapbooks.

Prerequisites: Normally, admission to this course will be based on the instructor's evaluation of the student's writing and on the achievement of a minimum grade of 70% in English 3901 or English 3900.

**4912 Advanced Creative Writing: Playwriting** is conducted as a seminar using models of contemporary writing and the students' own work. Each student will be required to submit work regularly.

Prerequisites: Successful completion of at least one Creative Writing course at the 3000-level, plus a portfolio specified by the instructor and permission of the instructor.

**4913 Advanced Creative Writing: Nonfiction** is conducted as a seminar using models of contemporary writing and the students' own work. Each student will be required to submit work regularly.

Prerequisites: Successful completion of at least one Creative Writing course at the 3000-level, plus submission of a portfolio specified by the instructor and permission of the instructor.

**4914 Advanced Editing** is editing for the workplace: An intensive course in drafting and editing. Students will be expected to work both individually and collaboratively.

Prerequisites/Co-requisite: Normally, admission to this course will be based on the instructor's evaluation of the student's writing. Class size will be limited.

**4920-4930 Special Topics in Creative Writing**

**4999 Essay for Honours Candidates**

**5000 Instructional Field Placement (6 credit hours)** occurs upon completion of course work. The curriculum emphasis is on the application of acquired skills. Continuing the project-oriented structure built into the practical courses, students will be placed with existing projects in the professional communities of film, television, theatre or video.

Prerequisites: English 3350, 3351, 3816, 4400, 4401 4402, with an overall average of 65% in these courses.

Note: *Restricted to students in Diploma in Performance and Communications Media. Admission is by application to the Program Coordinator, normally at least three months before the beginning of the placement, and is limited to students who at the time of admission have completed the six courses listed above with an overall average of at least 65% and who already hold a first degree or are in their final year of a degree program as confirmed by the Office of the Registrar. Credit for this course can be used only towards the Diploma in Performance and Communications Media.*

**5100 ESL Instructional Field Placement** is a 6 credit hour practicum consisting of classroom observation, group discussion of observations, one-to-one tutoring and classroom teaching practice. Participation in a weekly discussion group and submission of preliminary and final reports are required.

Prerequisite: Eng/Ling. 3105.

**5200 Instructional Field Placement in Professional Writing (6 cr. hrs.)** has students, upon completion of the courses in the Diploma in Professional Writing (18 credit hours), placed in work-place environments where they will contribute under supervision to the planning, drafting and editing of documents.

Prerequisites: Completion of the six courses in the program, with an overall average of 65% in these courses.

## 6.10 English as a Second Language Programs

The English as a Second Language office, affiliated with the Department of English Language and Literature, and under the auspices of the Faculty of Arts, offers year-round programs for adult students wishing to improve their English language skills and learn about Canadian culture. These include:

1. A five-week intensive English Language Summer School program;
2. English language preparation for students enrolled in graduate programs such as the Master's in Business Administration and Master's of Engineering;
3. Tutorials, workshops, and conversation programs for current Memorial University of Newfoundland students in undergraduate and graduate degree programs;
4. Custom-designed language and culture programs for schools, universities, or businesses. These can be developed on contract and are either for general learning purposes or to suit the needs of specific disciplines or professions; and
5. Twelve-week non-credit Intensive English Programs which are offered year-round on a semesterized basis.

Information regarding the above services is available from the Director of English as a Second Language programs at Memorial University of Newfoundland. Information regarding the Intensive English Programs is provided below.

A Diploma in teaching English as a Second Language is also offered through the Faculty of Arts. Information regarding that program can be found under the Faculty of Arts in this Calendar.

### 6.10.1 Intensive English Program

Memorial University of Newfoundland's full-time, non-credit Intensive English Program (IEP) is designed to improve English language skills for academic, professional and personal purposes. Reading, writing, speaking and listening skills are covered, and workshops on culture and social activities promoting integration with the local community also form part of the program.

The IEP is offered at intermediate to advanced levels in each of the Fall, Winter, and Spring terms. The program consists of two required courses: English as a Second Language 011F, Core Intensive English, and English as a Second Language 012F, Speaking, Listening, and Culture. Students admitted to the IEP must normally register for both courses each semester.

Students wishing to complete the Intensive English Program in preparation for admission to Memorial University of Newfoundland as undergraduate degree students may apply for this program at the same time as they apply for admission to undergraduate studies. Subject to **General Academic Regulations (Undergraduate)**, **Admission/Readmission to the University (Undergraduate)**, governing admission for undergraduate studies, and the regulations in place for admission to specific programs, students may be provisionally admitted for studies at an undergraduate level in an upcoming term if they are currently enrolled in the Intensive English Program. The **General Academic Regulations (Undergraduate)**, **Admission/Readmission to the University (Undergraduate)**, governing Admission/Readmission to this University, also contained in this Calendar, should be reviewed carefully by students as well.

Final admission for provisionally admitted students will be subject to successful completion of the Intensive English Program with an acceptable score on the Canadian Academic English Language (CAEL) Assessment. The CAEL Assessment is administered as part of the Intensive English Program at the end of each semester. Students enrolled in the Intensive English Program may be considered for enrolment in the Intensive English Bridge Program under the conditions described as the Admission requirements for that program.

Students at any level in the program may take the CAEL Assessment at the end of the semester. The number of semesters of Intensive English study required to achieve a student's desired level of proficiency will vary according to his or her initial proficiency level and individual progress rate.

#### 6.10.1.1 Admission Requirements

Applicants to the Intensive English Program:

1. must be at least 18 years old, and
2. must hold a valid high school diploma, and
3. should have an elementary level of English proficiency.

Applications for the Intensive English Program must be submitted directly in writing to Director, English as a Second Language Programs, Memorial University of Newfoundland, St. John's, NL, A1B 3X9, Canada.

#### 6.10.1.2 Program Requirements

1. Full participation is an essential part of the language learning process in this program. For this reason regular attendance is required. No more than 10% of instructional days may be missed without documented reasons that are acceptable to the Director of English as a Second Language programs. Students who fail to meet the minimum attendance requirements may not be permitted to re-enroll in the IEP in the following semester.
2. Evaluation of students may include, but not be limited to, any or all of the following: projects, assignments, quizzes, oral presentations, and class participation.

### 6.10.2 Intensive English Bridge Program

The Intensive English Bridge Program (IEBP) is intended for applicants to Memorial University of Newfoundland who have been provisionally admitted as undergraduate students and who are students in the advanced level of the Intensive English Program (IEP). It requires ten to fifteen hours of classroom language instruction in reading, writing, grammar, and listening. The emphasis is on English for Academic Purposes. Students in this program may register for an undergraduate credit course concurrently, in consultation with the Director of English as a Second Language Programs.

#### 6.10.2.1 Admission

Candidates for the Intensive English Bridge Program must have:

1. been provisionally accepted to undergraduate studies at Memorial University of Newfoundland;
2. achieved an average of Band 40 in the CAEL with a Writing sub-score of at least 40, a paper-based TOEFL score of 520, a computer-based TOEFL score of 190, an iBT TOEFL score of 68, or an IELTS score of 5.5 with no sub-score less than 5; and
3. achieved a grade of "C" or better with a satisfactory attendance level (90%) in both ENGS 011F and ENGS 012F if enrolled in the Intensive English program in the previous semester.

A student may be considered as a candidate for the Intensive Bridge Program under the following conditions:

#### 6.10.2.2 Program Requirements

1. Students admitted to the Intensive English Bridge Program must register for the course English as a Second Language 011F.
2. Students in this program may normally register for no more than one credit course, chosen in consultation with the director or coordinator of the English as a Second Language Program.
3. Students may register in the Intensive English Bridge Program for a maximum of two semesters.
4. Full participation is an essential part of the language learning process in this program. For this reason regular attendance is required. No more than 10% of instructional days may be missed without documented reasons that are acceptable to the Director of English as a Second Language programs. Students who fail to meet the minimum attendance requirements may not be permitted to re-enroll in the IEBP in the following semester.

### 6.10.3 Course Descriptions

**011F Core Intensive English Program** covers reading through a variety of types of texts, vocabulary development, writing development, and academic listening and note-taking skills. Students will be placed into appropriate sections following a placement test.

**012F Speaking, Listening, and Culture** includes development of speaking and listening abilities through a wide variety of tasks and communicative activities, including discussions, debates, conversation, role-plays, and presentations. Listening activities promote comprehension of rapid conversational

English, while discussion topics enrich students' understanding of Canadian culture. Students will be placed into appropriate sections following a placement test.

## 6.11 European Studies

Program Coordinator: Dr. O. Croci, Department of Political Science

### 6.11.1 Minor in European Studies

The Minor in European Studies is a multi-disciplinary program offered to candidates for the general and honours degrees of Bachelor of Arts, Bachelor of Business Administration, Bachelor of Commerce (Co-operative) and Bachelor of Science. The Minor in European Studies requires the completion of at least 9 credit hours at the Harlow Campus or as part of an approved exchange program with a European university. The Minor is an alternative to a Minor offered by a single department and satisfies degree requirements for a Minor.

The objective of the program is to explore contemporary Europe through the study of its politics, society, history and culture. The program consists of a series of inter-related courses in different disciplines focusing on present-day Europe and its recent history (19th and 20th centuries), and is coordinated by a Program Coordinator in consultation with the Director of the Harlow Campus.

### 6.11.2 Regulations

Students who minor in European Studies shall complete a minimum of 24 credit hours including:

1. European Studies 2000
2. History 2310
3. One of French 3650, German 2901, German 3000, German 3001, Russian 2900, Russian 2901, Spanish 3400
4. One of European Studies 3000-3030 (Special Topics in European Studies) or 3 credit hours from the European Studies Course List below.
5. Twelve additional credit hours from the European Studies Course List below including at least 9 credit hours completed at the Harlow Campus or as part of an approved exchange program with a European university or an approved study abroad program.

No more than 12 credit hours from any one discipline shall be applied to the Minor in European Studies. Students should consult the European Studies Minor Program Coordinator on the availability of courses at Harlow (or in exchange programs or study abroad programs) and at the St. John's and Sir Wilfred Grenfell College campuses.

### 6.11.3 Course List

Courses marked with an asterisk normally may be taken only after completion of at least one prerequisite at the 2000 level or beyond. Other courses, especially at the 3000 level and above, are normally taken after one or more introductory courses in the discipline are completed.

#### Economics

Economics 3610

#### English

English 2001, 2007 (Grenfell College), 2211, 2212, \*3022-097, 3710-3729 (available only as part of the Harlow Campus Semester), \*4300-097, \*4302-097

#### Folklore

Folklore 3601-097, 3613-097, 3710-3729 (available only as part of the Harlow Campus Semester)

#### French

Russian \*3650

#### Geography

Geography 2405, \*3410, 3710-3729 (available only as part of the Harlow Campus Semester), 3900-097, 3990-097

#### German

German 2901, 3000, 3001

#### History

History 2340, \*3360, \*3380, \*3460, \*3610, 3710-3729 (available only as part of the Harlow Campus Semester), 4360-4380 (available only as part of the Harlow Campus Semester)

#### Philosophy

Philosophy 3880, 3920, 3940

#### Political Science

Political Science \*3291, \*3300, \*3320, \*3330

#### Russian

Russian 2900, 2901

#### Sociology

Sociology 3710

#### Sociology/Anthropology

Sociology/Anthropology \*3242

#### Spanish

Spanish \*3400

#### Visual Arts

Visual Arts \*3702 (Grenfell College), \*4701 (Grenfell College), \*4702 (Grenfell College)

- Notes:
1. Students should consult the European Studies Program Coordinator on the applicability of special topics and other courses not listed above to the European Studies Minor program. In particular, courses taught at the Harlow Campus by other academic units and dealing with the broad themes of the program may be applicable to the Minor in European Studies. Such courses may be offered by Grenfell College, the Faculty of Business Administration, the Faculty of Science, the School of Music, and other faculties and schools.
  2. The suffix -097 indicates course sections offered at the Harlow Campus by various academic units.
  3. Courses in the series 3710 to 3729 indicate courses which form part of programs offered by the Faculty of Arts only at the Harlow Campus.
  4. Up to 6 credit hours in the discipline of a student's major programs may count towards the minor, but these shall be in addition to the minimum course requirements for the major



5. Normal prerequisites, policies on the waiver of prerequisites and credit restrictions in the respective departments will apply.

## European Studies

**2000 Europe in the 20th Century** (same as History 2350 and Political Science 2350) examines social, economic, and political changes from 1918 to the present including the collapse of monarchies, the emergence of mass politics, fascism and totalitarianism, World War II, postwar reconstruction and the welfare state, European integration, and Europe in the postwar economic and political order. The course will examine Britain, France, Germany, and Italy, and particularly the European Union. Special attention will be paid to the demise of class politics and the impact of postwar affluence.

**3000-3030 Special Topics in European Studies** will be a reflection on modern Europe through the study of one or more of the following: film, comparative literature, art, architecture, music, etc.

## 6.12 Folklore

### 6.12.1 General Degree

The study of Folklore deals with oral literature and traditional culture. Students study both the form and function of various kinds of Folklore. They also examine the influence of oral tradition upon written literatures.

A student benefits by coming to the study of Folklore with a strong concentration in one of the affiliated fields, such as English or other modern literature, Classics, Linguistics, Sociology and Anthropology, Geography, History, Psychology, or Religious Studies. (Certain specialized areas of Folklore call for training in Biology.)

A student interested in Folklore is advised to take several courses in Anthropology and at least an introductory course in language and dialect. Other courses should be complementary to the area of special interest. A student whose major interest is Newfoundland Folklore should have, for example, courses in Newfoundland Geography and Newfoundland History; and courses in the History and Geography of Ireland and England would be desirable. One interested primarily in Canadian Folklore would do well also to study the Geography, History and Literature of Canada. Such combinations of reinforcing courses in History, Geography, Literature, etc., can be varied according to the student's needs and goals.

Folklore 1000 (or 2000) is the prerequisite for all other courses in Folklore, except 1050, 1060 and those courses cross-listed with other Departments.

### 6.12.2 Major in Folklore

A student registered to major in Folklore must take a minimum of 36 credit hours in courses as follows:

1. Fifteen required credit hours: 1000 (or 2000), 2100, 2300, 2401, 2500;
2. Six credit hours from Group A - Folk Literature Genres: 3100, 3130, 3200, 3250, 3300, 3450, 3618;
3. Six credit hours from Group B - Folklife Genres: 3001, 3591, 3606, 3700, 3820, 3830, 3850, 3860, 4460;
4. Six credit hours from Group C - Topics: not more than 3 of which can be taken from courses at the 1000 level: 1050, 1060, 3460, 3591, 3618, 3700, 3800, 3900, 3910, 3920, 3930, 3940, 3950, 4015, 4440, 4480;
5. Three credit hours from Group D - Regions: 2230, 4300, 4310, 4320, 4350, 4360, 4370, 4400, 4410, 4420.

Students who declare a major in Folklore should have completed Folklore 1000 (or 2000); it is recommended that students intending to major in Folklore take Folklore 2100 as early in their programs as possible.

All students who major in Folklore will be assisted by a faculty advisor who will help them in planning their academic program. Consequently, it is essential that students consult with the Department at an early stage in their studies.

### 6.12.3 Minor in Folklore

A student declaring a minor in Folklore must take a minimum of 24 credit hours including:

1. Fifteen required credit hours: 1000 (or 2000), 2100, 2300, 2401, 2500;
2. Nine additional credit hours in Folklore - not more than 3 of which can be taken from courses at the 1000 level.

Students who declare a minor in Folklore should have completed Folklore 1000 (or 2000); it is recommended that students intending to minor in Folklore take Folklore 2100 as early in their programs as possible.

### 6.12.4 Honours Degree in Folklore

See General Regulations for Honours Degree. An Honours candidate in Folklore must complete a minimum of 60 credit hours, including the 36 as prescribed for the Major in Folklore. The remaining courses will normally include one of the following options:

1. Folklore 400X
2. Folklore 4998
3. Folklore 4999

### 6.12.5 Joint Honours Degree in Folklore and Another Major Discipline

See General Regulations for Honours Degrees. A minimum of 84 credit hours in the two subjects selected, with the approval of the Heads of both Departments, is required.

Of the credit hours required in the two subjects selected, not fewer than 42, and not more than 51, must come from each discipline. The candidate may choose the discipline in which to complete the Honours Essay or the Comprehensive Examination. If the student chooses the 400X option, the Folklore component will consist of the major in Folklore plus 400X, for a maximum of 51 credit hours in Folklore. Students are advised to choose an option as soon as possible after declaring the second subject of the Joint Honours degree.

### 6.12.6 Course List

In accordance with Senate's *Policy Regarding Inactive Courses*, the course descriptions for courses which have not been offered in the previous three academic years and which are not scheduled to be offered in the current academic year have been removed from the following listing. For information about any of these inactive courses, please contact the Head of the Department.

**1000 Introduction to Folklore** will discuss the role that tradition plays in

communication, art and society through an examination of folklore materials from Newfoundland and the English-speaking world. Readings and "listensings" will emphasize the use of folklore in context, e.g., the proverb in speech and the folksong in childrearing. Students will be urged to analyze the traditions in their own lives through special assignments. A student may not receive credit for both Folklore 1000 and 2000.

**1050 Folklore Studies** - inactive course.

**1060 Folklore and Culture** - inactive course.

**2000 Introduction to Folklore** - inactive course.

**2100 Folklore Research Methods - An Introduction** is designed to provide the basic introduction to the research resources, tools and methods regularly employed in the area of Folklore. On the one hand, the course will examine what types of Library and Archive resources can be useful to the folklorist and, on the other hand, it will explore how folklorists in fieldwork situations should handle people, and how they can capture for posterity a record of the interviews that they have conducted and the events that they have observed. This course qualifies as a Research/ Writing course.

Note: *It is strongly recommended that majors and minors take this course before taking 3000 and 4000 level courses.*

**2230 Newfoundland Society and Culture** (same as Sociology/ Anthropology 2230)

**2300 Newfoundland Folklore** (same as Anthropology 2300) is a survey of the various types of Folklore: tale, song, rhyme, riddle, proverb, belief, custom, childlore and others, with stress on their function in the Newfoundland community culture. Individual collection and analysis of materials from the students' home communities, supplemented by data from the M.U.N. Folklore and Language Archive.

Prerequisite: Folklore 1000 or 2000, or Anthropology 1031.

Note: *Credit may not be obtained for both Folklore 2300 and the former Folklore 3420.*

**2401 Folklife Studies** is an examination of the traditional cultures of Europe and North America with special reference to Newfoundland. A selection of the following areas will be covered: settlement patterns, architecture, work and leisure patterns in the folk community, calendar customs, rites of passage, folk religion, folk medicine, language and folk culture, folk costume, foodways and folk art.

Note: *Credit may not be obtained for both Folklore 2401 and the former Folklore 3500.*

**2500 Folk Literature** (same as Anthropology 2500) is an examination of the major genres of folk literature: folk narrative, folk poetry and song, folk drama, and the traditional generic forms within folk speech. An introduction to the textual, comparative and contextual methods of analysis. The literature discussed will be international in scope.

Prerequisite: Folklore 1000 or 2000, or Anthropology 1031.

Note: *Credit may not be obtained for both Folklore 2500 and any of the former Folklore 3400, English 3400, Sociology/Antropology 3400.*

**3001 Art, Architecture and Medieval Life** (same as Medieval Studies 3001, History 3020, Anthropology 3589) is an examination of the development of medieval art and architecture and of the ways in which they mirror various aspects of life in the Middle Ages. This course will include a discussion of art and architecture in the countryside, in the town, in the castle, in the cathedral and in the cloister.

Note: *It is recommended, but not obligatory, that students should have successfully completed one of the following courses: Anthropology 2480, Folklore 1000 or 2000, History 2320/MST 2001, History 2330/MST 2002, MST 2000.*

**3100 Folktale** is a study of oral fictional folk narrative, including animal tale, Märchen, jest, formula tale and related forms. Special attention to European and American texts and scholarship. Extensive reading, oral and written reports. Collecting of Newfoundland texts will be encouraged.

Note: *Credit may not be obtained for both Folklore 3100 and the former Folklore 4200.*

**3130 Greek and Roman Mythology** (same as Classics 3130)

**3200 Folksong** (same as Music 3017) is an introduction to the full range of traditional verse, song and music. Stress primarily on the songs of Canada, the United States and the British Isles, with attention to Newfoundland parallels. Examination of traditional vocal and instrumental styles as well as verse forms. Some reference to non-Western musical traditions. A knowledge of music is not a prerequisite.

Note: *Credit may not be obtained for both Folklore 3200/Music 3017 and the former Folklore 2430.*

**3250 The Ballad** is an examination of one of the major genres of international folk literature. Concerns include a taxonomic exploration of the sub-genres (tragic, comic, romantic, belief, historical, religious, riddling, and medieval minstrelsy ballads), and such topics as transmission, function, context, and aesthetics. Similarities and dissimilarities in the methodologies for dealing with written literature and the literature of tradition will also be considered.

Note: *Credit may not be obtained for both Folklore 3250 and the former Folklore 4445.*

**3300 Folk Drama** is a survey of the main forms of traditional drama found in Great Britain and North America with reference to related European and non-western traditions. The origins, history and regional variations of these forms will be considered together with questions of social function, performance and aesthetics. The history of research in the area of folk drama will be examined along with related methodological and theoretical issues.

**3450 Language and Play** is an examination of such forms as the rhyme, riddle, proverb and proverbial saying, game, etc. Emphasis on problems of function and classification. Material will be chiefly from the British and North American traditions. Collecting will be encouraged.

**3460 Folklore and Literature** (same as English 3460) will examine the interrelationships among folklore forms and literary genres, the influence of oral traditions on written literatures, and consider the theoretical issues raised by these interrelationships. The primary emphasis will be on the interpretation of literature from the perspective of folk tradition. Extensive reading, oral and written reports will be required.

Note: *Credit may not be obtained for both Folklore/English 3460 and the former Folklore/English 4450.*

**3591 Collections Management** (same as Anthropology 3591) will introduce students to the problems of collections storage with respect to environment, materials and artifact access. Students will become familiar with the materials encountered in archaeological and ethnographic collections. The storage of specific historic and prehistoric collections from Newfoundland and Labrador will be examined with the purpose of providing practical examples of methodology.

**3601-3620 (Excluding 3606 and 3618) Special Topic in Folklore**

**3606 Folklore and the Supernatural** attempts to understand the nature of surviving and declining tradition by examining patterns of belief and the features of supernatural folklore. The course focuses on the phenomenological features of supernatural traditions; explanatory frameworks and their internal logic; means of developing and maintaining belief; functions and structures of belief traditions; and relationships between genres of belief. The general approach of this course is ethnographic, focusing on the ethnography of belief systems.

**3618 Jazz and Blues: The Roots of Popular Music** (same as Music 3018) is an overview of blues and jazz as traditional musical forms. Lectures and listening will illustrate the development of regional music cultures and generic styles. To better understand the shift of blues and jazz from regional to global performance contexts, the course will examine the effects of changing transmissional media, from predominantly sensory media through contemporary media technologies. A term paper concerning musical style will entail library research and aural analysis.

**3700 Museums and Historic Sites** (same as Anthropology 3710) is an introduction to museums and historic sites, their work, and their role in societies past and present. Various types of museums and historic sites will be discussed using local, national and international examples, looking at their collections and exhibitions policies. Practical issues will also be discussed; these include museum exhibit display techniques, public programming, virtual museums, and the museum profession.

**3710-3729 Special Topics in Folklore** is available only as part of the Harlow Campus Semester.

**3800 Fieldwork in Vernacular Architecture: Drawings and Photography** - inactive course.

**3820 Folk Custom** provides an introduction to the study of the forms of British, European, and North American folk custom. Issues for discussion will include the diffusion, functions, maintenance and invention of calendar, seasonal, occupational, and life-cycle customs. As such, we will review much of the new scholarship which has shifted folkloristic attention from origins of customs to the analysis of custom as symbolic behaviour. Current work on the study of custom has examined, for example, the legitimization of class interests via traditional customs, the play of metaphor in festivals, and the symbolic statement of social obligations through life-cycle ritual.

Note: *Credit may not be obtained for both Folklore 3820 and the former Folklore 3600.*

**3830 Foodways** as a term embraces a variety of traditions which focus on dietary practices as well as the preparation and allocation of food. As an introduction to foodways, the course will begin by looking at a variety of regional foods. In addition, both historical and contemporary approaches to the supply, storage, preparation and serving of food will be considered. In fact, we will be looking, from both practical and theoretical perspectives, at the whole range of cookery and food habits - from the acquisition of raw materials to the allocation of portions.

**3850 Material Culture** (same as Anthropology 3850) is an examination of various interpretive theories of objects as cultural products. Problems of defining the artifact will be discussed, as well as the strengths and limitations of using objects in historical and ethnographic research. Questions discussed include form, design, decoration, diffusion, and the role of the creator of the object. Besides folkloristic work on material culture, a variety of interdisciplinary approaches will be considered. Emphasis will be on the material folk culture of Newfoundland and its European antecedents.

**3860 Vernacular Architecture** (same as Anthropology 3860 and History 3860) is a historical survey of vernacular architectural forms in various regions of North America, with attention to Newfoundland materials. Issues discussed include the relationship of house form and culture, the concepts of antecedents, diffusion, innovation and evolution of building forms and technologies, and the siting of buildings in the landscape. Dwelling houses, outbuildings, churches and industrial vernacular architecture will be included.

**3900 Newfoundland Vernacular Furnishings** is an introduction to the furnishings of the Newfoundland domestic interior, involving case studies from public and private collections. The focus of the course will be on furniture, looking at both urban and outport forms. The cultural context of typical furnishings will be discussed, as well as details of furniture form and construction. While furniture will be emphasized, other objects of domestic

material culture may be included: glass, ceramics, metalware and textiles.

**3910 Occupational Folklore** includes readings, lectures, and directed fieldwork aimed at identifying, documenting, and analyzing the role of tradition in contemporary occupational groups and work settings. Interdisciplinary theoretical perspectives on the nature of work and the characteristics of traditional, industrial and service occupations will be examined. Major topics of study will include work techniques, the uses of verbal and non-verbal codes, alienation, defensive behaviour, and labourlore.

**3920 Folklore and Education** - inactive course.

**3930 Folklore and Popular Culture** is an examination of the transitional processes involved in the development of folk societies to mass cultures with regard to folklore and the products of popular culture. In addition, sensory and technological media theories will be scrutinized and evaluated in conjunction with cultural comparisons of the qualities and functions of folksong, disc recordings and the radio; folktales, television melodrama and popular film; folk art and popular "techno-art" forms.

Note: *Credit may not be obtained for both Folklore 3930 and the former Folklore 2400.*

**3940 Folklore in Medieval Society** - inactive course.

**3950 Women and Traditional Culture** is an introduction to the ways in which women shape and/or are shaped by traditional culture. Readings and lectures will explore roles and contributions of women as folklore collectors, examine representations of women in folklore forms, and analyze women's creation of their own traditions.

**4015 Cultural Resource Management** (same as Anthropology 4015 and Geography 4015) is a study of cultural resource management: the definition and recognition of cultural resources, the application of policy in managing cultural resources, and the identification and consideration of contemporary issues in cultural resource management.

Three hours of lecture and three hours of seminar per week.

**4100 History and Memory** (same as History 4100) is a course which recognizes that memory is not one of the natural parts of ourselves, nor is remembering a way of connecting with a single reference point in a social reality outside ourselves. These things are socially determined. Starting here, this course is designed to have students reflect on what they know about the past and how they know about it. The class will examine how individual and social memory works, concentrating on particular historical contexts.

Note: *Credit may not be obtained for both History 4100 and the former History 4569.*

**4300 Folklore of Canada** is an examination of a variety of Canadian folklore from historical, geographical and cultural perspectives. Emphasis will be placed upon the application of theories of Canadian culture to folklore studies. Questions of the role of folklore and folklife with respect to identity, ethnicity, multiculturalism, national literature, regionalism and similar issues will be considered.

Note: *Credit may not be obtained for both Folklore 4300 and the former Folklore 1020.*

**4310 Studies in Newfoundland Folklore** studies rural and urban Newfoundland with specific reference to a culture in transition. Folklore is examined as one of the channels through which a people maintain, change and adapt various cultural patterns. The course will include field trips when feasible.

Prerequisite: Folklore 2300.

Note: *Credit may not be obtained for both Folklore 4310 and the former Folklore 3421.*

**4320 Folklore of the United States** - inactive course.

**4350 Folklore of the British Isles** - inactive course.

**4360 Traditional Culture of Scotland** - inactive course.

**4370 Culture and Traditions of Ireland** (same as Anthropology 4370) is an examination of the culture and traditions of Ireland through an

interdisciplinary approach; historical, geographical, cultural and literary factors will be considered. Emphasis will be on the contemporary scene.

Note: *Credit may not be obtained for both Folklore 4370 and the former Folklore 4351.*

**4400 Traditional Culture of French-Newfoundlanders** - inactive course.

**4410 Folklore of France** - inactive course.

**4420 French Folklore in the New World** (same as French 4420) is an examination of the directions taken in the collection and study of the folklore of the French in the New World. The French presence will be placed in a historic-geographic context, in order to trace, through the individuals and institutions associated with French folklore, the kinds of folklore studied and the differing theoretical and methodological stances adopted.

Note: *It is recommended, but not obligatory, that students should have successfully completed Folklore 1000 or 2000.*

**4440 Music and Culture** (same as Anthropology 4440 and Music 4440) examines traditional music as an aspect of human behaviour in Western and non-European cultures. Examination of the functions and uses of music; folk-popular-art music distinctions; and the relation of style to content. Outside reading, class exercises and individual reports will be required.

**4460 Folk Religion** (same as Religious Studies 4460) is an examination of folk responses to organized religion, surveying the religious forms and interpretations not specifically delineated by Theology. Areas of focus include: folk religious concepts of space and time; religion and healing; witchcraft and the devil; religious folk art and music; religious verbal art; the role and power of the holy person; the saint system; and community social activities sponsored by the church. A discussion of some current popular religious movements will also be included. Attention will be given to material in the MUN Folklore and Language Archive, and research based on field data will be encouraged.

Note: *Credit may not be obtained for both Folklore 4460 and the former Folklore 4240.*

**4480 Folklore and Oral History** (same as History 4480) is a seminar which deals with the uses of oral sources, particularly those which have a traditional dimension, for the study of history. It will discuss the methods developed by Vansina, Dorson and others for evaluating the historical meaning of oral traditions in literate and non-literate cultures. The uses of oral testimony in the study of traditional modes of life and work such as fishing and farming will be considered. The use of oral traditions in the study of social and political history will also be discussed.

**4500-4520 Special Topic in Folklore**

**4600-4615 Special Research in Folklore**

**4700-4715 Directed Reading Course**

**400X Folklore in the Community Context** is a 15 credit hour program of work open only to Honours students in Folklore.

Students will collect traditional material and analyze folkloric behaviour in a community setting. Each student will live and conduct field research in a small community in Newfoundland (or in one of the other Atlantic Provinces) for a minimum period of ten weeks. Before leaving for the community, the choice of which must be approved by the Department, the student will be assigned a supervisor by the Department, and in consultation with the supervisor will develop a proposed fieldwork project. The student will present reports to the supervisor during and upon the completion of the period of fieldwork. All original field data will be deposited in the MUN Folklore and Language Archive.

Included in the 400X program is the Honours dissertation for which three of the fifteen credit hours is awarded and which must be completed before the course is concluded. The dissertation must be a well-organized presentation and analysis of field data, including collectanea, descriptions of folkloric behaviour, and the biographies of major informants secured by interviews.

**4998 Honours Comprehensive Examination** may be written or oral, or a combination of both (3 credit hours).

**4999 Honours Essay** (3 credit hours)

## 6.13 French and Spanish

### 6.13.1 French and Spanish Programs and Regulations

The Department of French and Spanish offers the following programs:

1. French Major
2. French Minor
3. Honours Degree in French
4. Joint Honours in French
5. Frecker program in French Immersion
6. Canadian Third Year In Nice
7. Spanish Major
8. Spanish Minor

## 6.13.2 French

### 6.13.2.1 French Major Program

Students who choose French as their Major must complete at least 42 credit hours in French, including:

1. 2100 and 2101 OR 2159 and 2160
2. 2300
3. 2601 and 2602
4. 3100 and 3101
5. At least one of 3500, 3501, 3502, 3503 or 3504
6. At least 6 credit hours at the 4000 level

Notes: 1. No more than 6 credit hours at the 1000 level may be used to fulfil the minimum requirements of the Major in French.  
 2. No more than 12 transfer credit hours may be used to fulfil the minimum requirements of the Major in French.  
 3. By the time of their graduation, all students majoring in French must have spent at least four weeks at an approved Francophone institution in a French-speaking area or have acquired equivalent work experience in a Francophone environment.  
 4. It is strongly recommended that students in the Major program complete Classics 1120 and 1121.

### 6.13.2.2 French Minor Program

Students who choose French as their Minor must complete at least 24 credit hours in French, including:

1. 2100 and 2101 OR 2159 and 2160
2. 3100 OR 3101

Notes: 1. No more than 6 credit hours at the 1000 level may be used to fulfil the minimum requirements of the Minor in French.  
 2. No more than 6 transfer credit hours may be used to fulfil the minimum requirements of the Minor in French.

### 6.13.2.3 Honours Degree in French

See General Regulations for Honours Degrees.

An Honours degree in French shall consist of at least 63 credit hours in French and must include:

1. a maximum of 6 credit hours at the 1000 level;
2. a maximum of 15 credit hours at the 2000 level;
3. a minimum of 21 credit hours at the 4000 level, including French 4900 and 4999.

Notes: 1. All students completing the Honours program in French are required to complete Classics 1120 and 1121, or an equivalent acceptable to the Department. Students are strongly advised to complete this requirement as early as possible in their program.  
 2. By the time of their graduation, all students completing the Honours program in French must have spent at least two semesters at an approved Francophone institution in a French-speaking area or have acquired equivalent work experience in a Francophone environment.  
 3. No more than 24 transfer credit hours may be used to fulfil the minimum requirements of the Honours program in French.

### 6.13.2.4 Joint Honours

French may be combined with any other subject approved in the General Regulations to form a Joint Honours program. Candidates will establish their program in consultation with the Heads of the Departments of their chosen Honours subjects.

The Joint Honours program in French shall include at least 51 credit hours in French, including:

1. a maximum of 6 credit hours at the 1000 level;
2. a maximum of 15 credit hours at the 2000 level;
3. a minimum of 15 credit hours at the 4000 level.

Notes: 1. All students completing the Joint Honours Program in French are required to complete Classics 1120 and 1121, or an equivalent acceptable to the Department. Students are strongly advised to complete this requirement as early as possible in their program.  
 2. By the time of their graduation, all students completing the Joint Honours program in French must have spent at least two semesters at an approved Francophone institution in a French-speaking area or have acquired equivalent work experience in a Francophone environment.  
 3. No more than 18 transfer credit hours may be used to fulfil the minimum requirements of the Joint Honours program in French.

### 6.13.2.5 Transfer Credit for Language Courses

Students who successfully complete French language immersion programs offered by recognized universities and colleges in Canada and elsewhere may apply to have their courses evaluated for equivalent Memorial University of Newfoundland credit. To do so, they must follow such procedures as may be specified by the Office of the Registrar; they may also be required to sit a placement test administered by the Department of French and Spanish. The result achieved on this placement test will influence any determination of the number and level of transfer credits to be awarded.

Students intending to participate in the Summer Language Bursary Program or the Student Fellowship Programs are particularly advised to consult the Head of the Department of French and Spanish before leaving Memorial University of Newfoundland. All students intending to request transfer of credit are strongly advised to obtain a Letter of Permission from the Office of the Registrar before registering for any course of study offered by another institution.

Notes: 1. In any event, no more than 9 transfer credit hours in French at the first-year level, and 18 at the second-year level, may be granted to any student.  
 2. See specific program regulations for restrictions placed on the maximum number of transfer credit hours applicable to the Minor, Major, Honours and Joint Honours programs.

### 6.13.2.6 Special Examinations in French Language

The Department of French and Spanish offers to students the opportunity to sit a Special Examination of Linguistic Competence in French and a Special Examination of Linguistic Excellence in French. These written and oral examinations, held each year during the Winter semester, are intended to permit public recognition of superior proficiency in the French language by means of an entry on students' academic records. Any student registered in a Memorial University of Newfoundland degree program may sit the annual examinations, but successful results will become final only on graduation from a degree program. The standard of attainment required to pass the Special Examination of Linguistic Competence in French will be approximately equivalent to that of a high 'B' in French 4100 or 4101; that for the Special Examination of Linguistic Excellence in French is equivalent to high standing at a more advanced level.

### 6.13.2.7 Supplementary Examinations

Students registered for French 1500, 1501, and 1502 whose overall final mark is less than 50% but no lower than 45F may write a supplementary examination subject to the following regulations:

1. Students will be admissible to the supplementary examination only if the average of all other components of the final mark is at least 50%.
2. The supplementary examination will normally be identical to the deferred examination, if any, administered in the same course for that semester and will in any case be written at the time of administration of deferred examinations and will be similar in content and level of difficulty to the final examination originally written.
3. Students who are eligible to sit the supplementary examination must apply to the department within one week following the release of final grades by the Office of the Registrar.
4. Students who pass the supplementary examination will receive a new final grade calculated according to the same method and weighting as the original, but with the mark on the supplementary examination replacing that given for the original written final examination. This new final grade, if higher than the original, will replace the original grade on the student's transcript, subject to the condition that the final mark will not exceed the student's pro-rated term mark. The student's transcript will indicate that the course result was earned as the result of a supplementary examination.
5. A student may write a supplementary examination for any one registration in a course only once; if the course result following the supplementary examination is a fail then the course must be repeated in order to obtain credit.
6. Students taking these courses through the College of the North Atlantic who successfully pass a supplementary examination will receive Memorial University of Newfoundland credit for the course.

### 6.13.2.8 Frecker Program

The Frecker Program is a one-semester immersion program offered by Memorial University of Newfoundland in St-Pierre. Students who successfully complete this program will receive 15 credit hours in French as specified in Note 3. below. All students will board with French families and will participate in extra-curricular activities designed to take full advantage of the French milieu.

- Notes:
1. *The minimum prerequisites for admission to the program are successful completion of French 1502 and permission of the Head of the Department following written application. Admission to the program will be on a competitive basis and will depend on marks obtained in French courses at Memorial University of Newfoundland and on instructors' recommendations.*
  2. *The cost of room and board is partially subsidized by the Federal Government Bursary Program in the case of residents of Newfoundland and Labrador. (A limited number of non-bursary students may be admitted to the program.)*
  3. *Students who are admitted to this program will register for 2100, 2101, 2300, 2900, and 2601 or 2602.*

### 6.13.2.9 Canadian Third Year in Nice Program

Memorial University of Newfoundland is a member of a consortium of Canadian universities which offer the Canadian Third Year in Nice Program. This program enables students to spend a full academic year studying at the Université de Nice-Sophia Antipolis in the South of France. Canadian students participating in this program are accompanied by a faculty member from one of the Canadian universities participating in the program. This person teaches two of the five courses which students complete each semester in Nice, the other three being chosen from the offerings of the Université de Nice. Specific Memorial University of Newfoundland credits are awarded for successful completion of the courses taught by the Canadian coordinator and a block of unspecified transfer credits are awarded for the courses offered by the Université de Nice.

All courses completed under this program will be offered outside the normal time frame for courses offered at Memorial University of Newfoundland. Fall Semester courses will be completed between October and January each year, Winter Semester courses between February and May. This is the time frame of Sessions I and II at the Université de Nice-Sophia Antipolis.

#### COURSES

##### Session I (Fall Semester):

##### 3102 French Language Studies at Nice (I)

Prerequisite: French 2101 or permission of the Head of the Department

##### 3507 Advanced French Studies at Nice (I)

Prerequisite: French 2602 or permission of the Head of the Department

##### Session II (Winter Semester):

##### 3103 French Language Studies at Nice (II)

Prerequisite: French 3102

##### 3508 Advanced French Studies at Nice (II)

Prerequisite: French 3507

- Notes:
1. *The above-mentioned courses are offered only at the Université de Nice-Sophia Antipolis in France.*
  2. *Students should consult the Head of the Department regarding course selection.*

### 6.13.2.10 Course List

In accordance with Senate's *Policy Regarding Inactive Courses*, the course descriptions for courses which have not been offered in the previous three academic years and which are not scheduled to be offered in the current academic year have been removed from the following listing. For information about any of these inactive courses, please contact the Head of the Department.

- Notes:
1. *The Department of French and Spanish offers three consecutive credit courses in French language at the first-year university level, offering a complete overview of basic oral and written French. New students may choose to register initially in French 1500 or 1501; a diagnostic test is offered to assist students with initial course selection or to confirm that initial course selection is appropriate. Students with a limited background in French should register for French 1500 and continue with 1501. Students with a strong background in high-school French should bypass 1500 and begin their university study with 1501, especially if they intend to proceed beyond the first-year level. Very well-prepared students may apply to the Department for permission to enter 1502 directly. Bypassing one or more of these courses may*

*enable students to include a larger number of advanced electives in their degree program. French 1500, 1501 and 1502 require three hours of instruction per week and two additional hours of language laboratory work or conversation class, or both.*

2. *Students may not register concurrently for more than one of French 1500, 1501 and 1502 except with the permission of the Head of the Department.*
3. *French 2159 and 2160 are courses designed for former French immersion students as well as others with exceptional backgrounds in French, and are intended as an alternative to the 1500, 1501, 1502, 2100, 2101 sequence.*
4. *Students who have successfully completed one or more credit courses in French language will not subsequently be permitted to receive credit for courses not previously completed and judged by the Department to be of a lower level than those already completed. Students returning to the study of French after an absence should consult the Department for current information on these restrictions before registering. Students who wish to return to a previously completed course to improve their standing may do so only with the permission of the Head of the Department.*
5. *Students wishing to enrol in courses at the 4000-level must have*

completed at least French 3100 or 3101 and such additional prerequisites as may be specified (see individual calendar entries for details).

**1500 Introduction à la langue française, niveau universitaire I** cours pour débutants et pour ceux dont les connaissances du français sont très faibles. La permission de s'inscrire à ce cours ne sera pas accordée à ceux qui ont complété le Français 3202 (Immersion française au High School). Voir ci-dessus la note 1.

Note: *Les étudiants ne peuvent obtenir de crédit pour Français 1500 et l'un ou l'autre des cours Français 1010 et 1011 (désormais supprimés).*

**1500 Introductory University French I** is a course for beginners and for students whose background in French is very weak. Permission to register for this course will not be given to students who have completed French 3202 (High School French immersion). See Note 1. above.

Note: *Students may not receive credit for both 1500 and the former French 1010 or 1011.*

**1501 Introduction à la langue française, niveau universitaire II**

Voir ci-dessus la note 1.

Préalable: High School French 3200 ou permission du chef du département. Les étudiants qui ont complété un programme d'immersion devraient consulter le chef du département avant de s'inscrire à ce cours.

Note: *Les étudiants ne peuvent obtenir de crédit pour Français 1501 et Français 1050 (désormais supprimé).*

**1501 Introductory University French II**

See Note 1. above.

Prerequisite: High School French 3200 or permission of the Head of the Department. Ex-immersion students should consult the Head of the Department before registering for this course.

Note: *Students may not receive credit for both 1501 and the former French 1050.*

**1502 Introduction à la langue française, niveau universitaire III**

Voir ci-dessus la note 1.

Préalable: Français 1501 avec une note minimale de 60% ou la permission du chef du département.

Note: *Les étudiants ne peuvent obtenir de crédit pour Français 1502 et Français 1051 (désormais supprimé).*

**1502 Introductory University French III**

See Note 1. above.

Prerequisite: French 1501 with a grade of at least 60% or by permission of the Head of the Department.

Note: *Students may not receive credit for both 1502 and the former French 1051.*

**2100 Français intermédiaire I** rédaction, grammaire et pratique orale.

Préalables: Français 1502 avec une note minimale de 60%.

**2100 Intermediate French I** is a course on composition, grammar and practice in oral skills.

Prerequisite: French 1502 with a grade of at least 60%.

**2101 Français intermédiaire II** continuation du travail de rédaction, de grammaire et de communication orale.

Préalable: Français 2100.

**2101 Intermediate French II** is further work in composition, grammar and oral skills.

Prerequisite: French 2100.

**2159 Français avancé pour étudiants de première année I** ce cours est conçu principalement pour développer les compétences linguistiques des étudiants qui ont reçu leur formation dans les programmes d'immersion. La compréhension et l'expression écrites et orales seront développées au moyen d'exercices pratiques oraux et écrits. Les étudiants ayant des qualifications équivalentes peuvent s'inscrire à ce cours avec la permission du chef du département.

**2159 Advanced French for First-year Students I** is primarily intended to build on the language skills acquired by students in immersion programs. Development of reading, writing, listening and speaking ability through practical oral and written exercises. Other qualified students may register with the permission of the Head of Department.

**2160 Français avancé pour étudiants de première année II** révision intensive de la grammaire et pratique de la langue écrite et parlée pour assurer la précision linguistique à l'oral ainsi qu'à l'écrit et supprimer les anglicismes.

Préalable: Français 2159 ou Français 1060 (désormais supprimé).

Note: *Les étudiants ne peuvent obtenir de crédit pour Français 2160 et Français 2100 ou 2101.*

**2160 Advanced French for First-year Students II** is an intensive review of French grammar with oral and written practice. Particular attention will be paid to ensuring precision in language use in both oral and written forms and to eradicating anglicisms.

Prerequisite: French 2159 or the former French 1060.

Note: *Students may not receive credit for both French 2160 and French 2100 or 2101.*

**2300 Phonétique** introduction pratique à la phonétique du français. Emploi des symboles de l'alphabet phonétique, transcription phonétique et

phonétique corrective.

Préalable: Français 1502 ou équivalent.

**2300 Phonetics** is a practical introduction to French phonetics, including the International Phonetic Alphabet and phonetic transcription as well as corrective phonetics.

Prerequisite: French 1502 or equivalent.

**2601 Grammaire et texte** les étudiants exploreront des stratégies de lecture qui faciliteront la compréhension de textes narratifs et descriptifs divers. Ce cours sera enseigné normalement en français.

Préalables: Français 1502 ou 2159 ou équivalent.

**2601 Grammar and Reading** will explore reading strategies in a variety of narrative and descriptive readings in French. This course will normally be taught in French.

Prerequisites: French 1502 or 2159 or equivalent.

**2602 Pratique de la lecture** les étudiants exploreront des stratégies qui faciliteront la compréhension de textes informatifs et argumentatifs divers. Ce cours sera enseigné normalement en français.

Préalables: Français 2601 ou équivalent.

**2602 Reading Practice** will explore reading strategies in a variety of readings in French intended to inform or persuade. This course will normally be taught in French.

Prerequisites: French 2601 or equivalent.

**2900 Survol des cultures francophones** accent mis sur la compréhension et l'expression orales.

Préalable: Français 1502 ou équivalent. Les étudiants ayant reçu moins de 70% pour 1051 devraient normalement compléter Français 2100 avant de s'inscrire à ce cours.

Note: *Ce cours est un préalable pour 3650-3651-3653. Les étudiants ayant complété Français 2500 ne peuvent obtenir de crédit pour Français 2900.*

**2900 A Survey of Francophone Cultures** places emphasis on oral comprehension and expression.

Prerequisite: French 1502 or equivalent. Students who have obtained less than 70% in 1051 are, however, advised to complete French 2100 before attempting this course.

Note: *This course is a prerequisite for 3650-3651-3653. Students who have completed French 2500 may not obtain credit for French 2900.*

**3100 Grammaire et analyse de textes** révision des catégories nominale et verbale du français (morphologie, nombre, genre, temps, aspect, mode, voix). Analyse grammaticale et stylistique des textes avec un accent particulier sur l'emploi du verbe en français. Travaux d'expansion lexicale.

Préalables: Français 2101 ou 2160 et au moins un autre cours de français de niveau 2000.

**3100 Grammar and Textual Analysis** is a revision of the French noun and verb systems (morphology, number, gender, tense, aspect, mood, voice). Grammatical and stylistic textual analysis with special emphasis on the use of verbs in French. Vocabulary enrichment.

Prerequisites: French 2101 or 2160 and at least one other 2000-level course in French.

**3101 Stylistique et analyse de textes** rôle et fonction des parties du discours; exploitation sémantique (synonymie, polysémie); tropes et figures de style. Analyse grammaticale et stylistique de textes avec un accent particulier sur ces phénomènes. Travaux d'expansion lexicale.

Préalables: Français 2101 ou 2160 et au moins un autre cours de français de niveau 2000.

**3101 Stylistics and textual analysis** examines role and function of the parts of speech in French; semantic enrichment (synonymy, polysemy); tropes and figures of speech. Grammatical and stylistic textual analysis with special emphasis on these phenomena. Vocabulary enrichment.

Prerequisites: French 2101 or 2160 and at least one other 2000-level course in French.

**3300 Rhétorique et art oratoire** convaincre par le discours et le dialogue. Le cadre du cours est la rhétorique: mémoire, invention, disposition, élocution, diction. Exercices oraux variés. Deux heures et demie de cours et une heure de classe de conversation par semaine.

Préalables: Deux cours de français au niveau 2000.

**3300 Rhetoric and Public Speaking** is convincing and arguing in French. The course will be structured by rhetoric: memory, invention, disposition, elocution, diction. Various oral exercises. Two and a half hours of instruction plus one 50-minute period of conversation class per week.

Prerequisites: 6 credit hours in French at the 2000 level.

**3302 Histoire de la langue française** (identique à Linguistique 3302) Une étude des origines du français qui porte sur l'influence du gaulois, du latin vulgaire, du francique et de la division langue d'oc/langue d'oïl; survol des dialectes, de la morphologie et de la syntaxe de l'ancien français, ainsi que de l'évolution de l'ancien français au moyen français, en tenant compte de la phonologie, de la morphologie, de la syntaxe et du vocabulaire.

Préalables: Français 2101 (ou 2160) et 2300; Etudes classiques 1120 et 1121 fortement recommandés.

**3302 History of the French Language** (same as Linguistics 3302) is a study of the origins of French, including the influence of Gaulish, Vulgar Latin, Frankish and the langue d'oc/langue d'oïl division, a survey of the

dialects, morphology and syntax of Old French and of the evolution from Old to Middle French, including phonology, morphology, syntax and vocabulary.  
Prerequisites: French 2101 (or 2160) and 2300; Classics 1120 and 1121 are strongly recommended.

**3310 Phonologie et morphologie du français** (identique à Linguistique 3310) Une étude de la structure phonologique et morphologique du français. Données des variétés régionales et non-standard en contraste avec le français standard: règles formelles pour rendre compte des régularités observées. Interaction de la phonologie et de la morphologie dans la liaison et d'autres contextes. La flexion et la dérivation. On prescrit des articles de recherche sur l'un ou plusieurs des thèmes à l'étude et un rapport rédigé en français sur l'un ou plusieurs des articles. Ce cours est normalement enseigné en français.

Préalable: Français 2300 ou Linguistique 2104 avec soit Français 2100 soit Français 2159.

Note: *Il est fortement conseillé que les étudiants n'ayant pas complété Français 2300 complètent au moins un cours du niveau 2000 avant de suivre Français 3310.*

**3310 Phonology and Morphology of French** (same as Linguistics 3310) is an examination of the phonological and morphological structure of French. Data from regional and non-standard varieties contrasted with data from standard French: formal rules to deal with observed regularities. Interactions of phonology and morphology in phenomena such as liaison. Derivational and inflectional morphology. Research articles on one or more of the topics dealt with in the course will be assigned as readings, and a written report in French based on one or more of the articles is to be submitted as part of the term work. This course will normally be taught in French. Prerequisite: French 2300 or both Linguistics 2104 and either French 2100 or 2159.

Note: *Students who have not completed French 2300 are strongly advised to complete at least one 2000-level course in French before attempting French 3310.*

**3311 Initiation à la linguistique générale: aspects de la théorie linguistique française** (identique à Linguistique 3311) Étude pratique du système verbal du français et une exposition approfondie des systèmes de l'aspect, de la voix et des modes. Les concepts fondamentaux de la linguistique serviront de cadre à cette exposition: la distinction langue/parole et le rapport avec les entités sous-jacentes et de surface; le langage comme activité et la génération des éléments de surface à partir des systèmes sous-jacents. Ce cours sera normalement enseigné en français.  
Préalable: Un cours en linguistique ou Français 2100 ou 2159.

**3311 Introduction to General Linguistics: Aspects of French Linguistic Theory** (same as Linguistics 3311) is a practical examination of the French verbal system, with a thorough exposition of the systems of aspect, voice, tense and mood. The fundamental concepts of linguistics will form the framework of this exposition: the langue/parole distinction and its relationship to underlying and surface entities, language as activity and the generation of surface elements from underlying subsystems. This course will normally be taught in French.  
Prerequisite: A Linguistics course or French 2100 or 2159.

**3500 Introduction à la prose de langue française** une attention particulière sera accordée aux littératures du Canada français et de la France.  
Préalables: Français 2602 ou équivalent.

**3500 An Introduction to Prose Literature in French** pays particular attention to the literatures of French Canada and France.  
Prerequisites: French 2602 or equivalent.

**3501 Introduction au théâtre de langue française** une attention particulière sera accordée aux littératures du Canada français et de la France.  
Préalables: Français 2602 ou équivalent.

**3501 An Introduction to Drama in French** pays particular attention to the literatures of French Canada and France.  
Prerequisites: French 2602 or equivalent.

**3502 Introduction à la poésie de langue française** une attention particulière sera accordée à la poésie du Canada français et de la France.  
Préalables: Français 2602 ou équivalent.

**3502 An Introduction to Poetry in French** pays particular attention to the literatures of French Canada and France.  
Prerequisites: French 2602 or equivalent.

**3503 Thématique** un ou quelques thèmes reliés étudiés à travers un choix de textes d'expression française.  
Préalables: Français 2602 ou équivalent.

**3503 Study of Theme** is the study of a particular theme or of interrelated themes in selected French-language texts.  
Prerequisites: French 2602 or equivalent.

**3504 Histoire littéraire** l'étude d'une ou de quelques époques à travers un choix de textes d'expression française.  
Préalables: Français 2602 ou équivalent.

**3504 Literary History** is the study of one or more literary periods through selected French-language texts.  
Prerequisites: French 2602 or equivalent.

**3506 Cinéma francophone** un cours d'initiation conçu pour familiariser

l'étudiant avec les principales productions et directions du cinéma français. Ce cours est enseigné en français, et les films projetés ne seront pas nécessairement sous-titrés en anglais. Il est donc recommandé que les étudiants aient une bonne compréhension auditive du français.  
Préalables: Français 2602 ou équivalent.

**3506 French Cinema** A survey course designed to acquaint students with the major productions and trends in French cinema. The course is taught in French, and films screened will not necessarily have English subtitles. It is therefore recommended that students have a good aural comprehension of French.  
Prerequisites: French 2602 or equivalent.

**3650 Civilisation française** introduction à la civilisation française. Pratique de la langue orale et écrite.  
Préalable: Français 2900.

**3650 French civilization** is an introduction to the civilization of France. Practice in oral and written French.  
Prerequisite: French 2900.

**3651 Civilisation québécoise** introduction à la civilisation du Québec. Pratique de la langue orale et écrite.  
Préalable: Français 2900.

**3651 Quebec civilization** is an introduction to the civilization of Quebec. Practice in oral and written French.  
Prerequisite: French 2900.

**3653 Civilisation franco-canadienne hors Québec** introduction à la civilisation d'expression française du Canada à l'extérieur du Québec (par exemple franco-terre-neuvienne, acadienne, franco-ontarienne, franco-manitobaine, fransaskoise). Pratique de la langue orale et écrite.  
Préalable: Français 2900.

**3653 Canadian Francophone civilization outside Quebec** is an introduction to the civilization of French-speaking regions of Canada other than Quebec (for example of French Newfoundland, Acadia, Ontario and the West). Practice in oral and written French.  
Prerequisite: French 2900.

**3800 Étude interdisciplinaire de la civilisation française** - cours désactivé.

**3800 Interdisciplinary Topics in French Civilization** - inactive course.

**4100 Perfectionnement de l'expression** pratique intensive de la stylistique du français écrit; exploration des registres; rédaction de textes en vue d'un lectorat francophone (correspondance, rapport, réclamation, etc.). Pratique du français oral, niveau avancé.  
Préalables: Français 3100 et 3101.

**4100 Advanced French Expression** is an intensive review of the stylistics of written French, including levels of expression and composition of texts with a Francophone audience in mind (correspondence, reports, etc.). Advanced oral practice.  
Prerequisites: French 3100 and 3101.

**4101 Traduction et stylistique comparée** initiation aux principes et aux méthodes de la traduction (thème et version). Stylistique comparée du français et de l'anglais.  
Préalables: Français 3100 et 3101.

**4101 Translation and comparative stylistics** is an introduction to principles and methods of translation from French to English and English to French. Comparative stylistics of French and English.  
Prerequisites: French 3100 and 3101.

**4120-4129 Sujets spéciaux de langue française** cours avancés portant sur des aspects spécialisés de la langue française. Les sujets traités seront annoncés chaque année par le Département.  
Préalables: Français 3100 et 3101.

**4120-4129 Special topics in French language** are advanced courses on specialized topics in French language. Subjects to be treated will be announced each year by the Department.  
Prerequisite: French 3100 et 3101.

**4301 Étude des dialectes, patois et argots de France** - cours désactivé.

**4301 French dialects, patois, and argots** - inactive course.

**4310 La langue française au Canada** - cours désactivé.

**4310 The French Language in Canada** - inactive course.

**4400 Culture traditionnelle des Franco-Terre-Neuviens** - cours désactivé.

**4400 Traditional Culture of French-Newfoundlanders** - inactive course.

**4410 Folklore de France** - cours désactivé.

**4410 Folklore of France** - inactive course.

**4420 Folklore français du Nouveau Monde** examine les directions suivies dans la cueillette et l'étude du folklore des Français au Nouveau Monde. La présence française sera placée dans un contexte historique et géographique afin de retracer, à travers les institutions et les individus associés à l'étude du folklore français, les genres de folklore étudiés ainsi que les positions

théoriques et méthodologiques adoptées par les chercheurs.

Notes: 1. *Il est recommandé, mais pas obligatoire, que l'étudiant ait complété Folklore 1000 ou 2000.*

2. *Les étudiants peuvent s'inscrire au 4420 seulement avec la permission du chef du département.*

**4420 French Folklore in the New World** (same as Folklore 4420) is an examination of the directions taken in the collection and study of the folklore of the French in the New World. The French presence will be placed in a historic-geographic context, in order to trace, through the individuals and institutions associated with French folklore, the kinds of folklore studied and the differing theoretical and methodological stances adopted.

Notes: 1. *It is recommended, but not obligatory, that students should have successfully completed Folklore 1000 or 2000.*

2. *Students may enroll in French 4420 only with permission of the Head of the Department.*

**4420 French Folklore in the New World** - inactive course.

**4610 Mouvement littéraire I** histoire de la littérature d'expression française à travers l'étude d'un mouvement ou d'un courant littéraire jusqu'au romantisme (et indépendamment des genres): courtoisie, libertinage, libre pensée, baroque, humanisme, classicisme, romantisme, etc.  
Préalables: Deux d'entre 3500, 3501, 3502, 3503, 3504.

**4610 Literary Movement I** is French literary history through the study of a movement or trend in literature up to romanticism: courtoisie, libertinage, libre pensée (free thought), the baroque, humanism, classicism, romanticism, etc.  
Prerequisites: Two of: 3500, 3501, 3502, 3503, 3504.

**4620 Mouvement littéraire II** histoire de la littérature d'expression française à travers l'étude d'un mouvement ou d'un courant littéraire à partir du réalisme (et indépendamment des genres): réalisme, naturalisme, symbolisme, surréalisme, existentialisme, féminisme, postmodernisme, absurde, nouveau roman, roman du terroir, etc.  
Préalables: Deux d'entre: 3500, 3501, 3502, 3503, 3504.

**4620 Literary Movement II** is French literary history through the study of a movement or trend in literature since realism: realism, naturalism, symbolism, surrealism, existentialism, feminism, postmodernism, the absurd, nouveau roman, roman du terroir, etc.  
Prerequisites: Two of 3500, 3501, 3502, 3503, 3504.

**4630 Genre littéraire I** étude d'un genre littéraire à travers une littérature d'expression française et à travers les siècles; quelques genres dits traditionnels (poésie, romanesque, théâtre): poème, épopée, roman, conte, nouvelle, tragédie, comédie, drame.  
Préalables: Deux d'entre: 3500, 3501, 3502, 3503, 3504.

**4630 Literary Genre I** is a study of a genre from French literature of different periods to be chosen among the traditional or canonical forms (poetry, narrative fiction, theatre): poem, epic, novel, short story, novella, tragedy, comedy, drama.  
Prerequisites: Two of: 3500, 3501, 3502, 3503, 3504.

**4640 Genre littéraire II** étude d'un genre littéraire à travers une littérature d'expression française et à travers les siècles; les autres genres (littéraires et paralittéraires): essai, pamphlet, manifeste; mémoires, journal, autobiographie; littérature fantastique; paralittérature (best-sellers, policier, espionnage, science fiction, etc).  
Préalables: Deux d'entre: 3500, 3501, 3502, 3503, 3504.

**4640 Literary Genre II** is a study of a genre from French-language literature of different periods to be chosen among other literary and popular genres such as: essay, tract, manifesto; memoirs, diary, autobiography; personal writing, fantasy, best sellers, detective novel, spy novel, science fiction, etc.  
Prerequisites: Two of: 3500, 3501, 3502, 3503, 3504.

## 6.13.3 Spanish

### 6.13.3.1 Spanish Major Program

A Major in Spanish consists of a minimum of 36 credit hours in Spanish chosen from the courses listed below.

Note: *It is strongly recommended that students in the Spanish Major Program complete Classics 1120 and 1121.*

### 6.13.3.2 Spanish Minor Program

A Minor in Spanish consists of a minimum of 24 credit hours in Spanish from the courses listed below.

### 6.13.3.3 Study Abroad Programs in Spanish

The Spanish section of the Department of French and Spanish offers students the opportunity of participating in Study Abroad programs in Spanish. These programs are designed to provide an intensive immersion experience in a Spanish-speaking country each summer. On successful completion of one of these programs, students will be awarded specific credits applicable to their academic program at Memorial University of Newfoundland.

A Study Abroad program in Spanish will be offered each summer, provided that there is sufficient enrolment. All such courses will be offered outside the normal time frame for courses offered at Memorial University of Newfoundland.

#### COURSES:

**2010 Intermediate Spanish Language Studies** will emphasize the development of aural comprehension and oral expression in Spanish in an intensive immersion setting. The course will also include work on written expression and comprehension.  
Prerequisite: Spanish 1001 or permission of the head of the department.

**2020 Intermediate Hispanic Cultural and Literary Studies** will focus on hispanic literary and cultural studies at the intermediate level and in an intensive

**4650 Critique littéraire** - cours désactivé.

**4650 Literary Criticism** - inactive course.

**4651-4659 Sujets spéciaux de civilisation francophone** cours avancés portant sur des domaines spécialisés de la civilisation de la Francophonie. Les sujets traités seront annoncés chaque année par le Département.  
Préalable: Français 3650, 3651 ou 3653.

**4651-4659 Special topics in Francophone civilization** are advanced courses on specialized topics in Francophone civilization. Subjects to be treated will be announced each year by the Department.  
Prerequisite: French 3650, 3651 or 3653.

**4660 Théorie littéraire** approche d'un corpus particulier par l'intermédiaire de la théorie littéraire: théorie de la littérature, théorie de l'écriture féminine, sémiotique, pragmatique, herméneutique, rhétorique, poétique, narratologie, philosophie, psychoanalyse, etc.  
Préalables: Deux d'entre: 3500, 3501, 3502, 2503, 3504.

**4660 Literary Theory** studies a particular selection of literary works by using a theoretical perspective. The theoretical approach may be any of the following: theory of literature, theory of women's writing, semiotics, pragmatics, hermeneutics, rhetoric, poetics, narratology, philosophy, psychoanalysis, etc.  
Prerequisites: Two of: 3500, 3501, 3502, 3503, 3504.

**4820-4829 Sujets spéciaux de littérature d'expression française** cours avancés portant sur des aspects spécialisés de la littérature d'expression française. Les sujets traités seront annoncés chaque année par le Département.  
Préalables: au moins deux des cours Français 3500, 3501, 3502, 3503, 3504.

**4820-4829 Special topics in French-language literature** are advanced courses on specialized topics in literature written in French. Subjects to be treated will be announced each year by the Department.  
Prerequisite: Any two of French 3500, 3501, 3502, 3503, 3504.

**4900 Dissertation I pour la spécialisation en français** l'étudiant/e choisira un sujet de recherches en accord avec son directeur ou sa directrice de recherches, préparera une proposition détaillée et remettra un premier jet d'une partie de sa dissertation. Il ou elle devra rencontrer son directeur ou sa directrice du recherches régulièrement.  
Préalable: Admission dans le programme de spécialisation et permission du directeur du département.

**4900 Honours Essay I**, under the direction of their assigned supervisors, students will select an honours essay topic, prepare a research proposal, and submit a draft of at least one section of the honours essay. Students are expected to meet regularly with their supervisors.  
Prerequisite: Admission to the honours program in French and permission of the Head of Department.

**4999 Dissertation II pour la spécialisation en français** l'étudiant/e continuera l'écriture de sa dissertation sous la direction de son directeur ou de sa directrice de recherches. Il ou elle devra rencontrer son directeur ou sa directrice de recherches régulièrement.  
Préalable: français 4900 avec une note minimale de 70%.

**4999 Honours Essay II**, under the direction of their assigned supervisors, students will complete the writing of their honours essay. Students are expected to meet regularly with their supervisors.  
Prerequisite: Completion of French 4900 with a minimum grade of 70%.



immersion setting.

Prerequisite: Spanish 1001 or permission of the head of the department.

**3010 Advanced Spanish Language Studies** will be similar to Spanish 2010 but at a more advanced level.

Prerequisite: Spanish 2001 or permission of the head of the department.

**3020 Advanced Hispanic Cultural and Literary Studies** will be similar to Spanish 2020 but at a more advanced level.

Prerequisite: Spanish 2001 or permission of the head of the department.

Notes: 1. *The above mentioned courses are offered only in the context of a study-abroad program in a Spanish speaking country.*

2. *Students will be required to register for either Spanish 2010/2020 or Spanish 3010/3020 in any one program.*

3. *Students who are unsure whether they meet the prerequisites for any of the courses listed above should consult the Coordinator for Spanish.*

### 6.13.3.4 Course List

In accordance with Senate's *Policy Regarding Inactive Courses*, the course descriptions for courses which have not been offered in the previous three academic years and which are not scheduled to be offered in the current academic year have been removed from the following listing. For information about any of these inactive courses, please contact the Head of the Department.

**1000 Elementary Spanish I** is an introductory course, grammar, reading and oral Spanish.

**1001 Elementary Spanish II** is a continuation of Elementary Spanish I.

Prerequisite: Spanish 1000.

**2000 Intermediate Spanish I** is a continuation of the basic grammar, reading, and oral Spanish completed in the elementary program.

Prerequisite: Spanish 1001.

**2001 Intermediate Spanish II** is a continuation of Intermediate Spanish I.

Prerequisite: Spanish 2000.

**3000 Spanish Literature of the 18th and 19th Century I** - inactive course.

**3001 Spanish Literature of the 18th and 19th Century II** is a study of representative works of Spanish literature of the eighteenth and nineteenth centuries.

Prerequisite: Spanish 2001.

**3100 Spanish Literature of the Golden Age: Poetry and Drama** - inactive course.

**3101 Spanish Literature of the Golden Age: Prose** is a general introduction to the historical and cultural background and development of sixteenth and seventeenth century Spanish prose literature through study of *Lazarillo de Tormes*, *Don Quijote* and *El Buscón*. Special emphasis is laid on the picaresque novel and on the originality of Cervantes and the creation of the first truly "modern" novel.

Prerequisite: Spanish 2001.

**3200 Spanish Literature 20th Century I** is a general survey of Spanish literary works of the twentieth century, with a detailed study of representative authors.

Prerequisite: Spanish 2001.

**3201 Spanish Literature 20th Century II** - inactive course.

**3300 Hispanic Cinema and Culture** - inactive course.

**3400 Spanish Civilization** is a survey of Spanish history, literature, art and philosophy.

Prerequisite: Spanish 2001.

**3401 Spanish-American Culture and Civilization** explores Spanish-American culture and civilization from pre-Columbian times to the present through an examination of native (Aztec, Incan, Mayan, Quechua and Muisca) cultures and the impact on them of European discovery and colonization of the New World. Particular attention will be paid to the situation of the Indian and the mestizo in Spanish America and to the background of the various independence movements in the region.

## 6.13.4 Italian

### 6.13.4.1 Course List

**1000 Elementary Italian I** is for beginners in Italian. Introduction to the fundamentals of Italian grammar, with particular attention to the acquisition of basic skills in oral and written communication.

Lectures: Four hours per week.

Laboratory: One hour per week.

**1001 Elementary Italian II** is a continuation of Elementary Italian I.

Lectures: Four hours per week.

Laboratory: One hour per week.

Prerequisite: Italian 1000.

## 6.14 Geography

The following undergraduate programs are available in the Department:

1. Major in Geography (B.A. or B.Sc.)
2. Honours in Geography (B.A. or B.Sc.)
3. Minor in Geography

Prerequisite: Spanish 2001.

**3500 Spanish-American Literature I: 1500-1880** examines the development of Spanish-American literature from the European conquest to the Romantic movement, beginning with a comparison between Spanish and native American writing at the time of the conquest. The Baroque, Neo-classical and Romantic ages will be studied through the writings of such authors as Sor Juana Inés de la Cruz, Altamirano, Inclán and Flores.

Prerequisite: Spanish 2001.

**3501 Spanish-American Literature II: 1880-1980** is an examination of major trends in Spanish-American literature since Romanticism, with particular emphasis on the development of the modern novel and on the works of such authors as Gabriel García Márquez, Jorge Luis Borges and Julio Cortazar.

Prerequisite: Spanish 2001.

**3502 Spanish-American Cuento** examines generic characteristics and history of the short story. Major emphasis will be laid on a close reading of stories by Juan Rolfo, Jorge Luis Borges, Julio Cortazar and Gabriel García Márquez.

Prerequisite: Spanish 2001.

**3600 Spanish American Literature 20th Century** is a study of representative works of Spanish-American literature of the twentieth century.

Prerequisite: Spanish 2001.

**3601 Spanish American Literature 20th Century II** is a continuation of Spanish 3600.

Prerequisite: Spanish 2001.

**3700 Advanced Spanish I** covers oral Spanish, composition and reading of contemporary literary materials; phonetics.

Prerequisite: Spanish 2001.

**3701 Advanced Spanish II** is a continuation of Advanced Spanish I.

Prerequisite: Spanish 3700.

**4000 Medieval Spanish Literature I: Verse** - inactive course.

**4001 Medieval Spanish Literature II: Prose** - inactive course.

**4200 Nineteenth Century Spanish Novel** - inactive course.

**4201 Modern Spanish Novel** - inactive course.

**4500 Twentieth Century Spanish-American Novel** - inactive course.

**4501 Modernism in Spanish-American Literature** - inactive course.

**4502 Modern Spanish-American Drama** - inactive course.

**4503 Contemporary Spanish-American Poetry** - inactive course.

**4700 Oral and Written Spanish Composition I** - inactive course.

**4701 Oral and Written Spanish Composition II** - inactive course.

**4800 Directed Reading Course in Spanish** - inactive course.

4. Joint Programs
5. Focus in Geography
6. Diploma in Geographic Information Sciences

### 6.14.1 Major in Geography (B.A. or B.Sc.)

1. Students may complete a Major in Geography as part of either a B.A. or B.Sc. program. See the General Regulations for the B.A. and B.Sc. degrees as appropriate.
2. All students who major in Geography shall consult with their assigned faculty advisor, or the Head of the Department, who will help them in planning their academic program. For this purpose, it is essential that students declare their major at an early stage of their studies.
3. The Major in Geography consists of 45 credit hours in Geography courses including:
  - a. 1050, or 1000 & 1001, or 1010 & 1011;
  - b. 2001, 2102, 2195, 2226, 2302, 2425;
  - c. 3222, 3226;
  - d. Nine credit hours from courses at the 3000-level;
  - e. At least 9 credit hours chosen from courses at the 4000-level;
  - f. Further credit hours in courses at the 3000-level or above, to fulfil the required 45 credit hours in Geography courses.
4. B.Sc. candidates must complete 15 credit hours in science courses outside Geography at the 2000-level or above.

### 6.14.2 Honours in Geography (B.A. or B.Sc.)

1. Students intending to take an Honours degree in Geography must apply for entry to the Honours program through the Office of the Registrar.
2. Students accepted in the Honours program must:
  - a. Comply with the General Regulations for the Honours Degree of B.A. or B.Sc. as appropriate.
  - b. Arrange their program in consultation with the Head of the Department.
3. For the Honours Degree, a candidate will be required to have completed at least 60 credit hours in courses in Geography, including:
  - a. Forty-five credit hours in courses as listed under Major in Geography.
  - b. Geography 3230, 4990 and 4999.
  - c. Six additional credit hours at the 4000-level.

### 6.14.3 Minor in Geography

The Minor in Geography consists of 24 credit hours in Geography courses, including:

1. 1050, 2001, 2102, 2195, 2302, 2425; and
2. six credit hours in electives taken from Geography courses at the 3000- or 4000- level. or
3. 1000 and 1001, or 1010 and 1011;
4. 2001, 2102, 2195, 2302, 2425; and
5. three credit hours in electives taken from Geography courses at the 3000- or 4000- level.

### 6.14.4 Joint Programs

Regulations for the Joint Honours in Computer Science and Geography, Joint Honours in Geography/Earth Sciences, and Joint Major in Computer Science and Geography are found under the heading "Joint Programs" in the entry for the Faculty of Science.

Students who wish to take a Joint Major or a Joint Honours in Geography and another subject must arrange their program in consultation with the heads of the Departments concerned, and comply with the General Regulations of the appropriate Faculty.

### 6.14.5 Focus in Geography - Bachelor of Education (Primary/Elementary)

This program is only applicable to the Bachelor of Education Primary/Elementary degree program, and consists of 18 credit hours in Geography including:

1. 1050, 2001, 2102, 2195, 2302, and 2425, or
2. 1000 and 1001, or 1010 and 1011; and
3. 12 credit hours in courses chosen from 2001, 2102, 2195, 2302, and 2425.

### 6.14.6 Diploma in Geographic Information Sciences

Information regarding the Diploma Program in Geographic Information Sciences may be found under the heading Diploma Programs Offered in the Faculty of Arts.

### 6.14.7 General Prerequisites and Credit Restrictions

1. Mathematics 1000, or equivalent, is a prerequisite for Geography 3110, 3120, 3140, 3150, 3250, 3260;
2. It is strongly recommended that all 2000-level core courses be completed before registration in 3000-level courses. All 2000-level core courses must normally be completed prior to registration in a 4000-level course.
3. It is strongly recommended that Geography 3222 and 3226 be completed before registration in 4000-level courses.
4. Credit may not be obtained for 1050 and any one of 1000, 1001, 1010, or 1011.

### 6.14.8 Course Descriptions

In accordance with Senate's *Policy Regarding Inactive Courses*, the course descriptions for courses which have not been offered in

the previous three academic years and which are not scheduled to be offered in the current academic year have been removed from the following listing. For information about any of these inactive courses, please contact the Head of the Department.

Note: *Specific prerequisites for courses may be waived only with permission of the instructor and the Head of Department.*

**1050 Introduction to the Principles and Practice of Geography** focuses on five areas in geography which continue through courses in other years of the geography program: physical, cultural, economic, resources, and geographic information sciences. The lectures are linked to assignments, which provide both experience in the application of geographical skills and develop insight into the presence of geography at both the local and global scales.

Note: *Credit may not be obtained for 1050 and any of 1000, 1001, the former 1010, or the former 1011.*

**2001 Cultural Geography** is an introduction to the study of culture in geography, emphasizing both the history of the field from classic studies of landscapes to contemporary scholarship and themes of recent importance. These include the relationship between nature and culture: imperialism and colonialism; place, identity, and power; and global cultures of commodities, media, and tourism.

Prerequisite: Geography 1050, or the former 1011, or 1001.

**2102 Physical Geography: The Global Perspective** is a study of form, process, and change in natural systems at and near the surface of Earth, viewed as human environment. Emphasis is on global and regional scales in the systematic study of climate, water, landforms and vegetation.

Three hours of lecture and three hours of laboratory per week.

Prerequisite: Geography 1050, or the former 1011, or 1001.

Note: *Credit may not be obtained for 2102 and the former 2100 or 2101.*

**2105 Canada's Natural Environments and Landscapes** examines the characteristics and development of the natural environments and landscapes of each of the major regions of Canada. The diversity of natural environments is illustrated through discussion of the climatic, hydrological, biogeographical, and geomorphic processes responsible for shaping the land. The impact of both gradual and rapid (catastrophic) changes on local, national, and global scales will be emphasized.

Notes: 1. *This course is complementary to Geography 3405; students are encouraged to take both.*

2. *Credit may not be obtained for both Geography 2105 and the former 3100.*

**2195 Introduction to Geographic Information Sciences** is an introduction to the fields of cartography, remote sensing, and geographic information systems (GIS). Emphasis is on the understanding and appreciation of maps and map-like images.

Prerequisites: Geography 1050, or the former 1011, or 1001.

**2226 Field Methods I** is designed to introduce students to the practice of geography in the field. Field techniques will focus on the observation, identification, and collection of primary data. This course provides a basis for further study in advanced geography courses.

Prerequisite: Geography 1050, or permission of the instructor.

Note: *This course is a one credit hour course.*

**2290 Historical Geography of Newfoundland** is an examination of the spatial development of settlement in Newfoundland from the period of early European contacts to the present century. Themes include the impact of Europeans on native occupation, the regional background of European migrations, the regional growth of population and the spread of settlement as manifested on the cultural landscape. This course also serves as an option in the Newfoundland Studies Minor program.

Note: *Credit may not be obtained for both Geography 2290 and the former 3290.*

**2302 Issues in Economic Geography** covers basic issues and ideas in economic geography. The development of a regional economy will be related to underlying economic, cultural and physical factors.

Prerequisite: Geography 1050, or the former 1011, or 1001.

**2405 Lands and Seas of the Northern North Atlantic** is a comparative study of the marginal lands and seas of the Northern North Atlantic (parts of Eastern Canada including Newfoundland and Labrador, Greenland, Iceland, parts of Scandinavia and the British Isles) with emphasis on the history and ecology of population, settlement and resource use.

Note: *Credit may not be obtained for both Geography 2405 and the former 3400.*

**2425 Natural Resources** is an introduction to the concepts of natural resources, environment and conservation: the nature and distribution of natural resources; methods of use, allocation and development of natural resources and the role of various physical, social, economic, political and technological factors influencing decision-making about resources.

Prerequisite: Geography 1050, or the former 1011, or 1001.

Note: *Credit may not be obtained for both Geography 2425 and 3325.*

**2460 Regional Geography of the United States** is a holistic regional geography of the United States, including the terrain, geology, climate, vegetation, and fauna; the historical, political, cultural, and socio-economic geography of all parts of the USA; the interaction between physical and human geographic factors in cities, states, and regions; and the geographic factors shaping the modern United States.

Note: *Credit may not be obtained for both Geography 2460 and the former 3460.*

**2490 The Newfoundland Space Economy** - inactive course.

**2495 Regional Geography of Labrador** is a holistic study of the Geography of Labrador, including the terrain, geology, Quaternary history, climate, vegetation, and fauna; the cultural geography of Labrador, including Innu, Inuit, Métis, and Settler people and communities; economic activities in Labrador, and the interaction of the Labrador economy within Newfoundland, Canada, and globally; the management of physical and human resources; and the geographic techniques used to investigate and understand Labrador's unique Geography.

Note: *Credit may not be obtained for both Geography 2495 and the former 3495.*

**3000 Population Geography** is the geography of population distributions with special emphasis given to the population dynamics expressed in fertility, mortality and migration; techniques for analysis of vital statistics; world population problems; contrasting population policies of various countries.

Prerequisite: Geography 2001.

**3010 The Evolution of Urban Form (formerly 2010)** examines the origin and evolution of the city in Western civilization, paying particular attention to the social, political, and economic processes which have been instrumental in transforming its physical fabric.

**3110 Physical Geography of the Watershed** - inactive course.

**3120 Climatology** is an analysis of the energy and moisture budgets and circulation of the atmosphere at the macro- scale, together with an examination of resulting climate characteristics for selected world regions.

Three hours of lecture and three hours of laboratory per week.

Prerequisites: Geography 2102; Mathematics 1000.

**3140 Biogeography** is the application of ecological concepts to the study of the spatial variations in the distribution of plants and vegetation. Laboratory work emphasizes terrestrial flora of Newfoundland.

Three hours of lecture and three hours of laboratory per week.

Prerequisites: Geography 2102; Mathematics 1000.

**3150 Geomorphology** is a study of the relationships between geomorphic processes and landforms. Practical work will involve collection of data and samples in the field and analytical laboratory techniques.

Three hours of lecture and three hours of laboratory per week.

Prerequisites: Geography 2102 or Earth Sciences 2905; Mathematics 1000.

Note: *Credit may not be obtained for both Geography 3150 and the former Earth Sciences 3700.*

**3202 Introduction to Cartography** is an introduction to the field of cartography and its different components, including: projections, generalization, cartographic design, data classification, topographic and thematic mapping. Laboratory exercises will utilize Geographic Information Systems software.

Three hours of lecture and three hours of laboratory per week.

Prerequisites: Geography 2195 or permission of instructor.

Note: *Credit may not be obtained for both Geography 3202 and the former Geography 2200.*

**3210 History of Map Making** - inactive course.

**3215 Cartography Practicum** - inactive course.

**3222 Research Design and Quantitative Methods in Geography** is an introduction to principles of research design, and to the use of quantitative techniques. This course provides students with a basic understanding of data collection, entry, and analysis and presentation skills most commonly used by geographers.

Practical, computer-based exercises are an essential part of the course.

Three hours of lecture and three hours of laboratory per week.

Prerequisite: Geography 1050, or the former 1011, or 1001 and at least 9 credit hours from Geography 2001, 2102, 2195, 2302, 2425.

Note: *It is strongly recommended that this course be completed before registration in a 4000-level geography course. Credit may not be obtained for both Geography 3222 and the former Geography 2220, and Statistics 2500 or 2510.*

**3226 Field Methods II** is designed to provide students with field experience at a more advanced level, building on Geography 2226. In this course, the students will experience the field research process from the initial observation of a site through research and analysis to completion of a written report.

Prerequisite: Geography 2226.

Note: *This is a two credit hour course.*

**3230 Field Course** will normally be taken by Geography Majors just prior to the Fall Semester of their third year. The course will be held off campus and is designed to provide experience in instrument and field techniques in physical, economic and cultural Geography.

**3250 Introduction to Remote Sensing** is an introduction to digital image analysis. Will include many aspects of pre-processing and processing of airborne and satellite imagery.

Three hours of lecture and three hours of laboratory per week.

Prerequisites: Geography 2195; Mathematics 1000.

**3260 Introduction to Geographic Information Systems (GIS)** introduces the principles of GIS as they relate to spatial data input, structures, management, integration, analysis and output. Laboratory exercises permit students to use GIS software and explore how it can be applied to a wide

variety of disciplines and real world issues.

Three hours of lecture and three hours of laboratory per week.

Prerequisites: Geography 2195; Mathematics 1000.

Note: *Credit may not be obtained for both Geography 3260 and the former Geography 4251.*

**3303 Location Theory** is the theoretical basis of the study of economic geography. Theories of movement of people, goods and ideas, as well as theories of land-use, facility location and the development of agglomerations are examined.

Prerequisite: Geography 2302.

Note: *Credit may not be obtained for 3303 and the former 2300, 2301, 2303.*

**3320 Fisheries Geography** - inactive course.

**3321 Geography of Fishing Activity** - inactive course.

**3340 Techniques of Regional Analysis** - inactive course.

**3350 Geographical Aspects of Regional Planning and Development** - inactive course.

**3405 Canada** (formerly 2400) is a regional geography of Canada, with emphasis on social, economic and political characteristics. The course is a core course in the Canadian Studies Major program. This course is complementary to Geography 2105; students are encouraged to take both. Prerequisites: Geography 2001, 2102 and 2302; or 6 credit hours in courses for the Major in Canadian Studies; or permission of the instructor and the Head of the Department.

**3410 Regional Geography of Europe** - inactive course.

**3415 Regional Geography of the British Isles** - inactive course.

**3420 Regional Geography of the Former U.S.S.R.** - inactive course.

**3425 Geographical Analysis of Resources** is the geographic study of contemporary North American issues in resources and their management. Emphasis will be placed on air and water quality issues, lands and forest resources, energy resources, and coastal zone resources. A number of substantive areas in resource analysis will be considered, including resource appraisal, landscape evaluation, and environmental impact assessment. Prerequisite: Geography 2425 or equivalent.

Note: *Credit may not be obtained for both Geography 3425 and the former 4400.*

**3450 Regional Geography of South and Central America** - inactive course.

**3480 Regional Geography of Asia** - inactive course.

**3490 Regional Geography of Newfoundland** - inactive course.

**3500 Regional Geography of the Arctic** - inactive course.

**3510 Geography of the Seas** - inactive course.

**3610 Cultural Landscape** is an investigation of a principal subject of study in cultural geography; the human imprint on the land. The course will include a detailed consideration of the origin of landscape studies in geography; newer approaches emphasizing visual and representational aspects of landscapes; and several diverse case studies, historical and contemporary, concerned with struggles over their definition. Prerequisite: Geography 2001.

**3620 Migration and Colonization** is a study of population movements associated with colonization and frontier development. Prerequisite: Geography 2001.

**3701 Urban Geography** is an examination of the evolution, structure and dynamics of cities and urban systems. Prerequisite: Geography 2302.

**3710-3729 Special Topics in Geography (available only as part of the Harlow Campus Semester)**

**3800 Political Geography** is a geographic study of political ideas and processes. The course will consist of a historical discussion of the origins and trajectory of geopolitics, from the beginning of the 20th century to contemporary uses. Key themes in political geography, including strategy and statecraft, decolonization and nationalism, global technologies, and environmental security will be discussed. Prerequisite: Geography 2001.

**3900-3909 Special Topics in Geography** will have topics to be studied announced by the Department. Prerequisite: Permission of the instructor and the Head of the Department.

**3990-3999 Special Topics in Geography** will have topics to be studied announced by the Department. Prerequisite: Permission of the instructor and the Head of the Department.

**4000 Research Seminar in Population Studies** - inactive course.

**4005 Rural Settlement in an Urban World** - inactive course.

**4010 Cultural Geography** is concepts and methods in the study of cultural geography.

Prerequisites: Geography 2001 and at least one of 2290, 3000, 3010, 3610, 3620, 3800.

**4015 Cultural Resource Management** (same as Anthropology 4015 and Folklore 4015) is a study of cultural resource management: the definition and recognition of cultural resources, the application of policy in managing cultural resources, and the identification and consideration of contemporary issues in cultural resource management.

Three hours of lecture and three hours of seminar per week.

**4120 Applied Climatology (formerly 3121)** - inactive course.

**4130 Local and Micro-Climatology** - inactive course.

**4141 Glacial Environments** is an examination of the landforms, processes and sediments of past and present glacial environments. Course work will stress broad applications to environmental science.

Three hours of lecture and three hours of laboratory/field work per week.

Prerequisite: Six credit hours in physical geography courses at the 3000-level; or permission of Head of Department.

Note: *Credit may not be obtained for both 4141 and the former Earth Sciences 4701.*

**4150 Environmental Change and Quaternary Geography** (same as Anthropology (A/P) 4150) covers methods of reconstructing Quaternary environments; effects of Quaternary environmental change on landforms, with special reference to North America; development and characteristics of glacial and non-glacial climates.

Three hours of lecture and three hours of laboratory per week.

Prerequisites: Six credit hours in physical geography or in A/P courses at the 3000-level; or permission of Head of Department.

**4170 Advanced Biogeography** - inactive course.

**4180 Seminar in Advanced Physical Geography** will provide senior students with the opportunity to immerse themselves in selected aspects of physical geography by the preparation of papers, their presentation and discussion.

Prerequisites: Nine credit hours in physical geography courses at the 3000-level and/or 4000-level.

**4202 Advanced Cartography** will provide students with advanced knowledge in computer-based cartography required to produce final geographic datasets and maps. Laboratory exercises will utilize Geographic Information Systems software.

Three hours of lecture and three hours of laboratory per week.

Prerequisites: Geography 3202 or permission of instructor.

**4220 Advanced Quantitative Methods** - inactive course.

**4241 Research Seminar in Cartography** - inactive course.

**4250 Environmental Image Analysis** is remote sensing techniques applied to various environmental problems. Techniques include selection of the system for data acquisition (airborne or satellite imagery), planning of a ground truth survey, and of data processing. Applications to high and low density urban areas, agricultural, forestry, coastal zone, oceanic, and environmental monitoring.

Three hours of lecture and three hours of laboratory per week.

Prerequisite: Geography 3250.

**4261 Advanced Methods in Geographic Information Systems (GIS)** explores the nature and use of advanced GIS algorithms, discrete and continuous data structures, computational methods and analysis of error for the purpose of analyzing and modeling spatial patterns and processes. Laboratory exercises permit students to use GIS software to explore as well as develop problem solving and modeling skills for a wide variety of real world applications.

Three hours of lecture and three hours of laboratory per week.

Prerequisites: Geography 3260; Mathematics 2050; Computer Science 1710; (or equivalent, with permission of instructor and the Head of Department).

**4262 Advanced Applications in Geographic Information Systems (GIS)** - inactive course.

**4290 Geographic Information Sciences Practicum** is practical experience with the geographic information sciences fields of cartography, remote sensing or geographical information systems. Students will serve as interns in governmental, institutional or private agencies, or in non-profit organizations.

Six hours per week or a total of 72 hours of research or laboratory work.

Prerequisites/Corequisites: Geography 4202, 4250, 4261, and to be enrolled in the Diploma in Geographic Information Sciences.

**4291 Special Topics in Geographic Information Sciences** is current research issues in cartography, remote sensing and geographic information systems.

Prerequisites: At least two of 4202, 4250, and 4261, or permission of instructor and the Head of the Department.

**4300 Fisheries Seminar I** - inactive course.

**4301 Fisheries Seminar II** - inactive course.

**4320 Regional Development Seminar** is preparation of papers on various aspects of development, their presentation and discussion.

Prerequisite: Geography 3303.

**4390 Transportation Geography** - inactive course.

**4405 Outdoor Recreational Resources and Planning** is an introduction to the major themes and techniques in the study of outdoor recreation. A theoretical framework will provide a base for the evaluation of the complex issues involved in managing a physical resource for recreational purposes. North American examples will be emphasised.

Three hours of lecture and three hours of laboratory per week.

Prerequisite: Geography 2425 or 3325.

Note: *Credit may not be obtained for both Geography 4405 and Geography 4909.*

**4410 Research Seminar in Resources** offers the opportunity to undertake advanced work in a number of resource sectors such as energy, fisheries, forests, lands, air and water. The emphasis will be on learning through experience. Students will be expected to initiate and complete suitable research projects in close consultation with faculty involved.

Prerequisites: Geography 2425 or 3325.

**4600 Historical Geography** is a study of concepts and methods in historical geography. The field concerned with geographies of the past and their relation to the present. Themes will include the history of geography as a discipline, particularly its relevance to imperialism and state power; changing relationships between humans and the natural environment; and histories of the spaces of social life and human identity.

Prerequisites: Geography 2001 and at least one of 2290, 3000, 3010, 3610, 3620, 3800.

**4640 Historical Geography of Canada** (formerly 3240) explains the geographical dimensions of Canada, past and present, in terms of spatial origins and processes of geographical change in the population, economy and landscape of the country. Themes will include: changing perceptions of the environment; the historical demography of immigration and initial settlement; the reconstruction of past regional geographies; the sequent occupance of particular regions; the human alteration of the natural landscape.

Prerequisites: Geography 2001 and at least one of 2290, 3000, 3010, 3610, 3620, 3800; or 12 credit hours in core courses for the Major in Canadian Studies.

**4650 Conservation in Biology and Geography** (same as Biology 4650) is an examination of how biological and geographical principles can be applied

to conserving biological diversity in the natural world under conditions of exploitation and habitat loss. Special emphasis will be given to relevant provincial examples.

Three hours of lecture per week and 3 hours of seminar/discussion group per week.

Prerequisites: 30 credit hours in either Biology or Geography and permission of the course co-ordinator.

**4690 Research Seminar in the Historical Geography of Newfoundland** - inactive course.

**4700 Seminar in Advanced Urban Geography** will provide senior students with the opportunity to immerse themselves in the analysis of a small number of problems related to contemporary urban structure and growth.

Prerequisite: Geography 3701.

**4900-4918 Special Topics in Geography** will have topics to be offered announced by the Department of Geography.

Prerequisite: Permission of the instructor and the Head of the Department of Geography.

**4919 Integrative Practicum in Geographic Information Sciences** is an applied or research project integrating aspects of cartography, geographical information systems and remote sensing. Students will have access to the GISciences Research Laboratory to complete their project. This is the capstone course for the students registered in the Geographic Information Sciences diploma program. It will involve the knowledge and experiences acquired over the years in the program.

Six hours per week or a total of 72 hours of individual research or laboratory work.

Prerequisites/Corequisites: Geography 4202, 4250, 4261, and to be enrolled in the Diploma in Geographic Information Sciences.

**4990 Nature of Geography** is an examination of the major philosophical issues in the nature of geography and recent changes in geographical method. Particular emphasis will be placed on the implications of the quantitative, systems, behavioural and ecological approaches in geography, the use of models, the place of theory and the study of process in geography.

This course is primarily intended for Honours students.

**4999 Dissertation Honours Degree**

## 6.15 German and Russian Language and Literature

### 6.15.1 German

#### 6.15.1.1 General Degree

All candidates who did not matriculate in German will begin their study with Elementary German 1 (1000).

#### 6.15.1.2 German Language and Literature Major Program

Candidates majoring in German must comply with the **UNIVERSITY REGULATIONS - General Academic Regulations (Undergraduate)** and arrange their program in consultation with the Head of the Department. They will normally be required to complete a minimum of 36 credit hours in German including at least 12 credit hours in the following courses or their equivalents: 1000, 1001, 2010, 2011.

#### 6.15.1.3 German Language and Literature Minor Program

A Minor in German will consist of a minimum of 24 credit hours including at least 12 credit hours in the following courses or their equivalents: 1000, 1001, 2010, 2011.

#### 6.15.1.4 German Studies Minor Program

A Minor in German Studies is offered as a special program of an interdisciplinary nature, consisting of a minimum of 24 credit hours in courses as follows:

1. Eighteen credit hours in German, including: 1000; 1001; 2010 and 2011; 2900; 2901;
2. Six credit hours taken in either additional courses in German and/or from cognate courses offered by other departments, such as History 3370, 3380, Philosophy 3850, 3851, 3860, to be chosen through prior consultation with the Head of the Department.

Note: *German 2030, 2031, 2900, 2901, 2910, 3000/3001, 3911, 3912, 3913 and the Special Topics courses in German Studies may not be used as part of the Faculty or Arts requirement for 6 credit hours in a second language.*

#### 6.15.1.5 Honours Degree

Candidates wishing to take an Honours degree in German must arrange their program in consultation with the Head of the Department. They will be required to comply with the University regulations for Honours degrees, to take a minimum of 60 credit hours in German with at least a 'B' standing, and to write a comprehensive examination or present a Honours Essay in their final year. Candidates reading German in a Joint Honours degree program will take a minimum of 42 credit hours in German with at least a 'B' standing.

It is highly desirable that, during their course of study, all Honours candidates spend at least one program of study or work in a German-speaking country.

#### 6.15.1.6 Course List

In accordance with Senate's *Policy Regarding Inactive Courses*, the course descriptions for courses which have not been offered in the previous three academic years and which are not scheduled to

be offered in the current academic year have been removed from the following listing. For information about any of these inactive courses, please contact the Head of the Department. The Department offers several courses in Germany during the Spring/Summer semester. See the Departmental web page at

[www.mun.ca/german](http://www.mun.ca/german) for details on the German Field School.

**1000 Elementary German I (F) & (W)** is a course intended to give beginners a basic knowledge of the spoken and written language and culture of the German-speaking countries.

**1001 Elementary German II (F) & (W)** is a continuation of Elementary German I with the same basic text.  
Prerequisite: German 1000.

**2010 Intermediate German I** is mainly a completion and thorough review of the fundamentals of the German language, with a continued strong cultural component.  
Prerequisites: German 1000 and 1001 or equivalent.

**2011 Intermediate German I (W)** is a continuation of 2010.  
Prerequisites: German 2010 or consent of the Head of the Department.

**2020 Scientific German I (F)** - inactive course.

**2021 Scientific German II (W)** - inactive course.

**2030 Reading German I (F)** gives training in reading scholarly German for senior undergraduate and graduate students with no previous knowledge of German, for whom this work is recommended or required by other departments or faculties.

Note: *This course may not be used to satisfy the second language requirement.*

**2031 Reading German II (W)** is a continuation of Reading German I. In this course an attempt will be made to meet individual requirements.  
Prerequisite: German 2030.

Note: *This course may not be used to satisfy the second language requirement.*

**2510 Intermediate Composition and Conversation I (W)** - inactive course.

**2511 Intermediate Composition and Conversation II (S)** is a continuation of Intermediate Composition and Conversation I. This course includes a 4-week field school in Germany in August, which lengthens the time frame for the course by approximately two weeks.  
Prerequisite: German 1001 or consent of the Head of the Department.

**2900 Introduction to German Culture I (F)** is a study of the major cultural trends and movements of German-speaking Europe to the beginnings of the modern age. Lectures are given in English. This course qualifies as a research/writing course.

**2901 Introduction to German Culture II (W)** is a study of the major cultural trends and movements of German-speaking Europe in the modern age. Lectures are given in English. This course qualifies as a research/writing course.

**2910 Myths of the North** - inactive course.

**3000 German Film I** is a survey of German film from the beginnings to 1945.

**3001 German Film II** is a survey of German film from 1945 to the present.

**3002-3009 (Excluding 3005) Special Topics in German Studies I**

**3005 West to East: Aspects of the German Intellectual Influence on Russia** (same as Russian 3005 and History 3005) examines the fluidity of ideas across geo-political borders, languages and cultures, by exploring how the German intellectual discourse was received and reinterpreted by Russians in their literary, artistic and cultural dialogue. Ideas about the Romantic Hero become conflated with theories involving the Will, the Nietzschean Superman and the Proletarian Revolutionary, personified and embodied in what some scholars characterize as political/cultural Gods (Lenin, Stalin, Hitler).

**3010 Advanced German I (F)** aims at a high level of accomplishment in German pronunciation, composition and translation through practice in the spoken language, written exercises and the reading of more advanced literary material.  
Prerequisites: German 2010 and 2011 or German 2020 and 2021.

**3011 Advanced German II (W)** is a continuation of Advanced German I, with the same texts.  
Prerequisites: German 3010 or consent of the Head of the Department.

**3510 Advanced Composition and Conversation I (S)** aims to increase accuracy and fluency in written and spoken German with emphasis on culture. This course includes a 4-week field school in Germany in August, which lengthens the time frame for the course by approximately two weeks.  
Prerequisite: German 2011 or consent of the Head of the Department.

**3511 Advanced Composition and Conversation II (S)** aims to increase accuracy and fluency in written and spoken German with emphasis on

grammar review. This course includes a 4-week field school in Germany in August, which lengthens the time frame for the course by approximately two weeks.

Prerequisite: German 2011 or consent of the Head of the Department.

**3900 Survey of German Literature I (F)** is a study of the chief periods of German literature based on works of representative authors. A general survey from the earliest works to 1805.

Prerequisites: One of German 2011, 2511, 3011 or the consent of the Head of Department.

**3901 Survey of German Literature II (W)** is a study of the chief periods of German literature based on works of representative authors. A general survey from 1805 to the present.

Prerequisites: One of German 2011, 2511, 3011 or the consent of the Head of Department.

**3911 Faust and the Magus Tradition** - inactive course.

**3912 Modern German Literature in Translation I (F)** - inactive course.

**3913 Modern German Literature in Translation II (W)** - inactive course.

**4000 German Literature of the Eighteenth Century I (F)** is a study of the historical and cultural background of the eighteenth century, of Enlightenment and Storm and Stress. Reading and discussion of representative works with emphasis on Lessing, Goethe and Schiller.

Prerequisites: One of German 2011, 2511, 3011 or the consent of the Head of Department.

**4001 German Literature of the Eighteenth Century II (W)** is a study of the historical and cultural background of the eighteenth century, of Storm and Classicism. Reading and discussion of representative works with emphasis on Goethe and Schiller.

Prerequisites: One of German 2011, 2511, 3011 or the consent of the Head of Department.

**4010 Advanced Stylistics I (F)** is specialized study of the more complex areas of German grammar, style, and idiomatic usage, involving intensive practice in composition and oral expression, and focused on detailed work with contemporary cultural materials such as newspapers, television, and film.

Prerequisites: One of German 2011, 2511, 3011 or the consent of the Head of Department.

**4011 Advanced Stylistics II (W)** is a continuation of Advanced Stylistics I.

Prerequisite: German 4010 or consent of the Head of the Department.

**4100 German Literature of the 19th Century I (F)** is a study of the leading exponents of nineteenth-century literature, including the background of Romanticism and the young Germany movement.

Prerequisites: One of German 2011, 2511, 3011 or the consent of the Head of Department.

**4101 German Literature of the 19th Century II (W)** is a study of the leading exponents of nineteenth-century literature, including the background of Poetic Realism and Naturalism.

Prerequisites: One of German 2011, 2511, 3011 or the consent of the Head of Department.

**4200 German Literature of the Twentieth Century I (F)** traces the important literary movements up to 1945, using a number of representative authors. Reading of selected dramas, novels, poems and short stories.

Prerequisites: One of German 2011, 2511, 3011 or the consent of the Head of Department.

**4201 German Literature of the Twentieth Century II (W)** traces the important post 1945 literary movements, using a number of representative authors. Reading of selected dramas, novels, poems and short stories.

Prerequisites: One of German 2011, 2511, 3011 or the consent of the Head of Department.

**4300 Middle High German Language and Literature I (F)** - inactive course.

**4301 Middle High German Language and Literature II (W)** - inactive course.

**4400 Early Modern German Literature I (F)** - inactive course.

**4401 Early Modern German Literature II (W)** - inactive course.

**4802-4811 Special Topics in German Studies II**

**4998 Comprehensive Examination for Honours Students**

**4999 Honours Essay for Honours Students**

## 6.15.2 Russian

Information regarding the Russian Studies program can also be found online at [www.mun.ca/german/Russian/russianprogram.html](http://www.mun.ca/german/Russian/russianprogram.html).

Russian 1000 and 1001 are prerequisites for all other Russian courses except Russian 2030, 2031, 2600, 2601, 2900, 2901 and 3910.

Russian 2600, 2601, 2900, 2901 and 3910 may not be used as part of the Faculty of Arts requirement of 6 credit hours in a second language.

### 6.15.2.1 Russian Language and Literature Major Program

A Major in Russian consists of a minimum of 36 credit hours in Russian including Russian 2600, 2601, 2900, 2901 and 3010, as well as 6 credit hours in courses at the 4000 level.

### 6.15.2.2 Russian Language and Literature Minor Program

A Minor in Russian consists of a minimum of 24 credit hours in Russian including 12 credit hours in the following: Russian 1000, 1001, 2010, and 2011.

Students should note that credit for courses 2600 and 2601 will not normally count towards a Minor in Russian Language and Literature.

### 6.15.2.3 Russian Studies Minor

A Minor in Russian Studies is offered as a special program of an interdisciplinary nature, consisting of a minimum of 24 credit hours, namely 12 credit hours in Russian and 12 in at least two disciplines, to be chosen in consultation with the Head of Department of German and Russian from the following course offerings:

1. Geography 3420, History 3350, History 3360, Philosophy 3890, Political Science 3020, Political Science 3320, Sociology 3710
2. and other such courses as may be added to the list from time to time by the Faculty of Arts Committee on Undergraduate Studies.

### 6.15.2.4 Course List

In accordance with Senate's *Policy Regarding Inactive Courses*, the course descriptions for courses which have not been offered in the previous three academic years and which are not scheduled to be offered in the current academic year have been removed from the following listing. For information about any of these inactive courses, please contact the Head of the Department. The Department offers several courses in Russian during the Spring/Summer Semester. See the Departmental web page at [www.mun.ca/german/Russian/Rus/Courses.htm](http://www.mun.ca/german/Russian/Rus/Courses.htm) for details on the Russian Summer Program.

**1000 Elementary Russian I (F)** is a course intended to give beginners the fundamentals of Russian grammar and a basic knowledge of the spoken and written language.

**1001 Elementary Russian II (W)** is a continuation of Elementary Russian I with the same basic text and a reader.  
Prerequisite: Russian 1000 or equivalent.

**2010 Intermediate Russian I (F)** continues the linguistic study begun in the first year and to introduce students to Russian texts from literature or newspapers.  
Prerequisites: Russian 1000 and 1001 or equivalent.

**2011 Intermediate Russian II (W)** is a continuation of Intermediate Russian I.  
Prerequisites: Russian 1000 and 1001 or equivalent.

**2030 Russian for Reading I (F)** - inactive course.

**2031 Russian for Reading II (W)** - inactive course.

**2510 Intermediate Composition and Conversation I (F)** increases fluency in speaking and writing Russian.

**2511 Intermediate Composition and Conversation II (W)** is a continuation of Russian 2510.

**2600 Russian Literature in Translation: Nineteenth Century** is a study of selected works of Russian authors including Pushkin, Lermontov, Gogol, Turgenev, Tolstoy, Dostoyevsky, Chekhov. This course qualifies as a Research/Writing course.

**2601 Russian Literature in Translation: Twentieth Century** is a study of selected works of Russian authors of the pre-revolutionary, Soviet and post-Soviet periods. This course qualifies as a Research/Writing course.

**2900 Russian Culture I** is a study of the evolution of Russian culture and Russian intellectual history until 1917. Lectures regularly supplemented by examples of Russian art, music and film. No prerequisite. Lectures are given in English. This course qualifies as a Research/Writing course.

**2901 Russian Culture II** is a study of the evolution of culture in the USSR and during the post-Soviet period. Insights into the social and political character of pre- and post-revolutionary Russia. Lectures regularly supplemented by examples of Russian art, music and film. No prerequisite. Lectures are given in English. This course qualifies as a Research/Writing course.

## 6.16 History

### 6.16.1 General Degree

1. See the General Regulations for the B.A. Degree.
2. Any one of History 1010-1015 or the sequence History 1100\* and 1101\* form the introductions to the theory and practice of history. Third and fourth-year students taking History courses as electives or to satisfy General Regulations for the B.A. Degree are encouraged to enrol in the department's second-year courses. Students cannot receive credit for more than two first-year courses.
3. All students who Major in History will be assisted by a faculty advisor who will help them in planning their academic programs. It is essential that students register with the Department at an early stage of their studies.

### 3000-3009 (Excluding 3005) Special Topics in Russian Studies

**3005 West to East: Aspects of the German Intellectual Influence on Russia** (same as German 3005 and History 3005) examines the fluidity of ideas across geo-political borders, languages and cultures, by exploring how the German intellectual discourse was received and reinterpreted by Russians in their literary, artistic and cultural dialogue. Ideas about the Romantic Hero become conflated with theories involving the Will, the Nietzschean Superman and the Proletarian Revolutionary, personified and embodied in what some scholars characterize as political/cultural Gods (Lenin, Stalin, Hitler).

**3010 Advanced Russian I (F)** is an advanced study of literary texts and grammar, composition and translation with practice in the spoken language.  
Prerequisites: Russian 2010 and 2011.

**3011 Advanced Russian II (W)** is a continuation of Advanced Russian I with the reading and discussion of selected texts from Russian short stories, magazines and newspapers.  
Prerequisites: Russian 2010 and 2011.

**3900 Survey of Russian Literature I (F)** - inactive course.

**3901 Survey of Russian Literature II (W)**

**3910 The Post-Soviet Era** is designed to study the relationship between radical changes in Russia since 1985 and the effects of perestroika and glasnost on Russian literature, journalism, film and Russian cultural life of the post-Soviet era.  
No prerequisites, lectures are given in English.

### 4001-4010 Special Topics in Russian

**4100 Russian Literature of the Nineteenth Century I** is a study of major Russian authors, including Pushkin, Lermontov, and Gogol.  
Prerequisite: One of Russian 2011, 2511, 3011, or permission of the Head of the Department.

**4101 Russian Literature of the Nineteenth Century II** is a study of major Russian authors of the second half of the century, including Tolstoy, Dostoyevsky, and Chekhov.  
Prerequisite: One of Russian 2011, 2511, 3011, or permission of the Head of the Department.

**4200 Russian Literature of the Twentieth Century I** is a study of major authors including Gorky, Babel, Blok, Bely, and Mayakovsky.  
Prerequisite: One of Russian 2011, 2511, 3011, or permission of the Head of the Department.

**4201 Russian Literature of the Twentieth Century II** is a study of major Russian authors of the Soviet period including Sholokhov, Pasternak, Evtushenko, and Solzhenitsyn.  
Prerequisite: One of Russian 2011, 2511, 3011, or permission of the Head of the Department.

**4800 Special Topics in Russian Studies I**

**4801 Special Topics in Russian Studies II**

**4. Major in History**

Students who undertake a Major in History must complete 36 credit hours in History, including:

- Three credit hours in a course beginning with the initial digit '1'. All first-year courses in History are research/writing courses.
- At least 12 credit hours in courses with the initial digit '2' including 3 credit hours in one of History 2200, 2210 or 2400.
- Students should complete at least 9 credit hours in courses with the initial digit '2' before registering in a course with the initial digit '3'. Students should obtain advice on the appropriate courses from their faculty advisor.
- At least 9 credit hours in courses with the initial digit '3'. Students must complete History 3840 for which there is a prerequisite of 12 credit hours in History.
- Students should complete at least 3 credit hours in courses with the initial digit '3' before registering in a course with the initial digit '4'.
- At least 6 credit hours in courses with the initial digit '4'.
- Six additional credit hours in courses with an initial digit beyond '1'.
- The following courses may not be used to meet the requirements for a Major in History without the prior written approval of the Head: 4480, 4800, 4821, 4822, and 4999.
- No more than 15 transfer credit hours in History may be used to fulfil the requirements for a Major in History.
- Some fourth-year courses may require completion of courses in the same topic/subject area. Such prerequisites are at the discretion of the instructor.

**5. Minor in History**

Students who undertake a Minor in History must complete 24 credit hours in History, including:

- Three credit hours in a course beginning with the initial digit '1'. All first-year courses in History are research/writing courses.
- At least 9 credit hours in courses with the initial digit '2'.
- Students should complete at least 6 credit hours in courses with the initial digit '2' before registering in a course with the initial digit '3'.
- At least 6 credit hours in courses with the initial digit '3'.
- At least 3 credit hours in courses with the initial digit '4'.
- No more than 9 transfer credit hours in History may be used to fulfil the requirements for a Minor in History.
- Three additional credit hours in courses with an initial digit beyond "1".
- Some fourth-year courses may require completion of courses in the same topic/subject area. Such prerequisites are at the discretion of the instructor.

**6. Specialization in Maritime History**

The Department of History offers a specialization in Maritime History. Recommended courses include History 2100\*\*, History 2110, History 3680, History 3690, and 6 credit hours from History 4670-4690.

\* For descriptions of History 1100 and 1101, see the separate section under Sir Wilfred Grenfell College.

\*\* Sir Wilfred Grenfell College only.

**6.16.2 Honours Degree**

- Students intending to take an Honours Degree with a Major in History must comply with the General Regulations for the Honours degree of Bachelor of Arts.
- For consideration as entrants during the Fall semester, students must make application by 30 June; for the Winter semester, by 1 November. Applications received after 30 June will be considered for the Winter semester; applications received after 1 November will be considered for the next Fall semester. Students intending to complete an Honours degree in History will be assisted by a faculty advisor who will help them in planning their academic programs. The academic programs for Honours students must be approved by the Head or delegate.
- Students are required to complete at least 60 credit hours in History, 45 chosen in accordance with the pattern set out in the Departmental General Degree Regulation No. 4 above. In addition, students must complete History 3840 (or the former 4801), 4800, 4821, 4822, and 4999. The minimum grades required are: (a) 70%, or an average of 75%, in the prescribed number of courses, and (b) 70% in History 4999.
- Students electing Joint Honours are required to complete at least 51 credit hours in History, 39 chosen in accordance with the pattern set out in the Departmental General Degree Regulation No. 4 above. In addition, students must complete History 3840 (or the former 4801), 4800, 4821, and 4822, with grades prescribed in Honours Degree Regulation No. 3. If the candidate chooses to do the Honours Essay (4999) in History, it must be passed with a grade of 70% or better.
- No more than 27 transfer credit hours may be included in the minimum 60 credit hours required for the Honours degree in History.

Note: *Normally, an Honours degree is required for those entering graduate studies. However, students taking a B.A. degree may enter graduate studies after completing History 3840 (or the former 4801), 4800, 4821, or equivalents.*

**6.16.3 Course List**

In accordance with Senate's *Policy Regarding Inactive Courses*, the course descriptions for courses which have not been offered in the previous three academic years and which are not scheduled to be offered in the current academic year have been removed from the following listing. For information about any of these inactive courses, please contact the Head of the Department.

**1010 The North Atlantic in the Age of Expansion, 1492-1776** is a thematic examination of European imperial expansion into the North Atlantic and the Americas, starting with the discoveries of Columbus and concluding with American Independence. This course qualifies as a research/writing course.

**1011 Europe and the Wider World, 1750-1914** is a thematic examination of the political, economic, social and cultural developments in Europe and the wider world from the French Revolution to World War I. This course

qualifies as a research/writing course.

**1012 The World in the Twentieth Century** will examine some of the major themes in world history since 1914. This course qualifies as a research/writing course.

**1013 Issues in Canadian History** will examine the historical context for various contemporary problems being experienced by Canadians. This course qualifies as a research/writing course.

**1014 Issues in United States History** will examine several historical themes or problems in the history of the United States. This course qualifies as a research/writing course.

**1015 Ideas and Society in the West** introduces students to early modern western history (1500 - 1800) through the study of original texts. It will combine lectures on the historical background to the texts, discussion of them and analysis of their meanings in assigned essays. This course qualifies as a research/writing course.



**1070 A History of Canada's Native Peoples** - inactive course.

**2020 Introduction to Ancient History** (same as Classics 2025) is an introduction to the history of ancient city-states, kingdoms and empires, including economic, social, political and cultural developments.

**2031 Ancient Asian History** - inactive course.

**2035 History of Classical Greece** (same as Classics 2035) is a survey of Greek history from the Bronze Age to the death of Alexander the Great, with special reference to the social and political institutions of the fifth century B.C.

Note: *Students may not receive credit for History/Classics 2035 and either of the former History/Classics 3910 or History/Classics 2030.*

**2040 History of Rome** (same as Classics 2040) is a survey of Roman history from the early monarchy to the reign of Constantine, with special reference to society and politics in the late Republic and early Empire.

Note: *Students may not receive credit for History/Classics 2040 and the former History/Classics 3920.*

**2110 North Atlantic History Since 1820** is a survey of the relations among the regions of the North Atlantic since 1820. Emphasis will be placed on social and economic history.

**2130 Seafaring Places and Seafaring Peoples: An Introduction to Oceanic History 1650-1850** - inactive course.

**2200 Canadian History to Confederation, 1867** is a survey of Canadian History to Confederation, 1867.

**2210 Canada Since 1867** is a survey of Canadian history since Confederation.

**2300 Introduction to Modern European History, 1500-1789** is an introduction to the main issues and problems in early modern European history with an emphasis on the political, social, economic and cultural developments from the sixteenth to the eighteenth century.

**2310 Europe in the Nineteenth Century, 1789-1914** is a survey of the economic, social, political and cultural developments of Europe from 1789-1914.

**2320 Medieval Europe to 1050** (same as MST 2001) is a survey of the economic, social, political and cultural developments of the early Middle Ages.

Note: *Credit may not be obtained for both History 2320 and the former History 2030.*

**2330 Medieval Europe, 1050 to the Reformation** (same as MST 2002) is a survey of the economic, social, political and cultural developments of Europe in the high and late Middle Ages.

Note: *Credit may not be obtained for both History 2330 and the former History 2030.*

**2340 European Urban History** examines the development of urban networks and the growth of specific towns and cities in early modern and modern Europe. We will also study how these centres were perceived, and the roles of public spaces and public festivals. Much of this course is devoted to examining the conditions found in urban centres and the impact on local inhabitants. The course concludes with a study of nineteenth-century urban boosterism.

Prerequisite: At least 3 credit hours in history.

**2350 Europe in the Twentieth Century** (same as European Studies 2000 and Political Science 2350) examines social, economic, and political changes from 1918 to the present including the collapse of monarchies, the emergence of mass politics, fascism and totalitarianism, World War II, postwar reconstruction and the welfare state, European integration, and Europe in the postwar economic and political order. The course will examine Britain, France, Germany, and Italy, and particularly the European Union. Special attention will be paid to the demise of class politics and the impact of postwar affluence.

**2400 A History of Atlantic Canada since 1500** is a history of the peoples and provinces of Atlantic Canada from the time of first European contact with First Nations.

Note: *Credit cannot be obtained for History 2400 and the former History 3100.*

**2500 The Twentieth Century I** is a study of the world-wide impact of the main events and developments in the age of global interdependence.

Note: *Credit may not be obtained for both History 2500 and the former History 3700.*

**2510 The Twentieth Century II** is an historical analysis of the main issues in the contemporary world since 1945.

Note: *Credit may not be obtained for both History 2510 and the former History 3710.*

**2600 History of the United States of America to 1865** is a survey of the history of the United States of America from the origins of the independence movement to the Civil War.

Note: *Credit cannot be obtained for History 2600 and the former History 3230.*

**2610 History of the United States of America Since 1865** is a survey of the history of the United States of America since the Civil War.

Note: *Credit cannot be obtained for History 2610 and the former History 3240.*

**2700 Art History Survey I** (same as Visual Arts 2700) is the history of art from prehistoric times to the Renaissance.

**2701 Art History Survey II** (same as Visual Arts 2701) is the history of art from the Renaissance to the twentieth century.

**3000 Medieval Books** (same as Medieval Studies 3000, English 3002, Religious Studies 3000) is an examination of the development and role of the manuscript book during the Middle Ages. Topics covered will include book production and dissemination; authors, scribes and audiences; and various kinds of books (e.g. glossed Bibles, anthologies, books of hours, etc.) and their uses.

Prerequisite: Medieval Studies 2000, 2001 or 2002 or permission of the instructor.

**3005 West to East: Aspects of the German Intellectual Influence on Russia** (same as German 3005 and Russian 3005) examines the fluidity of ideas across geo-political borders, languages and cultures, by exploring how German intellectual discourse was received and reinterpreted by Russians in their literary, artistic and cultural dialogue. Ideas about the Romantic Hero become conflated with theories involving the Will, the Nietzschean Superman and the Proletarian Revolutionary, personified and embodied in what some scholars characterize as political/cultural Gods (Lenin, Stalin, Hitler).

**3011-3019 Special Topics in Ancient and Medieval History** are specialized studies in Ancient and Medieval history. Topics to be studied will be announced in the History Department brochure.

Note: *Credit may not be obtained for both History 3803 and History 3016.*

**3020 Art, Architecture and Medieval Life** (same as Medieval Studies 3001, Anthropology 3589, Folklore 3001) is an examination of the development of medieval art and architecture and of the ways in which they mirror various aspects of life in the Middle Ages. This course will include a discussion of art and architecture in the countryside, in the town, in the castle, in the cathedral and in the cloister.

Note: *It is recommended, but not obligatory, that students should have successfully completed one of the following courses: Anthropology 2480, Folklore 1000 or 2000, History 2320/MST 2001, History 2330/MST 2002, MST 2000.*

**3050 History of Warfare to 1789** is a survey of major developments in the history of warfare from the earliest times to 1789 with particular emphasis on changes in the nature and conduct of warfare, the evolution of military thinking, the organization of military and naval forces, the impact of technological change, the emergence of professionalism and the relationship between societies and armed forces.

**3060 History of Modern Warfare since 1789** is an examination of those major developments which have affected the nature and conduct of warfare in the period since 1789, with particular emphasis on the evolution of military thinking, the impact of technology on organization and planning, the role of air power, the civil-military relationship, professionalism in the armed forces, and the changing nature of warfare, the emergence of total war, global war, guerilla warfare, and limited warfare.

**3110 History of Newfoundland to 1815** studies the growth of settlement and the manner in which a 'migratory' fishery carried on from England and Ireland changed into a 'sedentary' fishery carried on by residents of Newfoundland.

**3120 Modern Newfoundland Since 1815** examines the establishment and development of political institutions, changes in economic structure and the growth of populations.

**3130 History of French Canada Since 1791** is a discussion of political, social, economic, cultural and religious developments from the Canada Act to the present.

**3140 Social History of the Canadian Worker to 1896** - inactive course.

**3150 Social History of the Canadian Worker since 1896** - inactive course.

**3200 Women and the Law in Newfoundland History** (same as Law and Society 3200) examines how legal reforms addressed or challenged the values of the community. Students will investigate the various ways in which Newfoundland women interacted with the law and on occasion found themselves before a magistrate.

**3250 Migration History of North America** - inactive course.

**3270 Christianity and the Roman Empire** (same as Classics 3270 and Religious Studies 3270) is a study of the relationship between Christianity and the Roman Empire from the first to the fourth century.

**3330 France, 1750-1852** - inactive course.

**3340 France Since 1852** - inactive course.

**3350 Imperial Russia** - inactive course.

**3360 Revolutionary and Soviet Russia** studies Russian history from the 1917 Revolutions to the emergence of the USSR as a superpower.

**3370 German History I, to the Mid-Nineteenth Century** - inactive course.

**3380 German History II, Since the Mid-Nineteenth Century** examines the history of German-speaking central Europe with special reference to the evolution of modern Germany since the mid-nineteenth century.

**3440 History of the British Empire and Commonwealth since 1815** examines the transition from British Empire to Commonwealth of Nations.

**3450 Tudor and Stuart Britain, 1485-1714** examines the emergence of Britain under the Tudors and early Stuart monarchs.

**3460 British History Since 1714** examines British history from the accession of the Hanoverians to the welfare state.

**3480 History of Ireland, 1603 to the Great Famine** is a survey of Irish history from Hugh O'Neill's submission to the English in 1603 to the mid-nineteenth century disaster of the Great Famine.

**3490 History of Ireland Since the Great Famine** is a survey of Irish history from the mid-nineteenth century to the present.

Note: *Credit may not be obtained for both History 3490 and the former History 3470.*

**3515 Prehistory of Mesoamerica** - inactive course.

**3520 The Early Ethnohistory of North America's Native Peoples** (same as Anthropology 3520) examines the North American native response to early European contact and initial settlement. Particular attention will be paid to cultural change resulting from the adoption of European goods, participation in the fur trade, the introduction of European disease, and the adaptation to a permanent European presence.

**3525 The Later Ethnohistory of North America's Native Peoples** (same as Anthropology 3525) examines Indian and Inuit cultural history of the eighteenth and nineteenth centuries, including the fur trade, resistance and accommodation to European expansion, the emergence of revitalization movements, demographic changes, and population shifts. Special emphasis will be placed on the ethnohistory of the native peoples of what is now Canada and northern United States.

**3530 Historical Archaeology** (same as Anthropology 3582) will introduce students to historical archaeology, with special reference to the North Atlantic, 1000 to 1900 AD. The archaeology of specific historic sites, including Newfoundland sites, will be examined in order to raise theoretical issues and to give practical examples of methodology. Students will be introduced to the methodological challenges of palaeography, analysis of historic maps, survey, excavation and analysis of complex sites, underwater archaeology, documentary archaeology, material culture and subsistence studies, interpretation, conservation and cultural resource management. The course will consider theoretical approaches including historical anthropology, ethnohistory, world systems and consumer studies.

**3535 Historical Anthropology** (same as Anthropology 3584) will explore selected issues in historical anthropology, with special reference to the Mediterranean and North Atlantic worlds. Students will read specific case studies in order to explore the theoretical issues raised by the attempt to understand historically-documented past cultures. In order to give practical examples of methodology classes will analyse primary source material. Students will be introduced to the textual analysis of myth and legal records, to the interpretation of images and to the analysis of patterns in material culture. The course will consider specific current interpretive issues, particularly the rise of individualism, the consumer revolution and the cultural construction of gender.

**3540 History of China** - inactive course.

**3545 History of Modern Japan** - inactive course.

**3550 History of India** - inactive course.

**3555 Methods and Materials in Historical Archaeology** (same as Anthropology 3555) is a combination lecture and laboratory course designed to acquaint students with the analysis of artifacts and other evidence from historical archaeological sites. It is ordinarily intended to follow Anthropology 3480, Field and Laboratory Techniques in Archaeology.

**3560 A History of Human Rights** - inactive course.

**3570 The Modern Middle East** is an examination of the peoples and states of the Middle East and their interaction with each other and with the great powers since the mid-nineteenth century.

**3580 South Africa Since 1815** - inactive course.

**3585 Tropical Africa Since 1800** - inactive course.

**3600 Industrial Revolutions of the Eighteenth and Nineteenth Centuries** - inactive course.

**3610 International Economic History of the Nineteenth and Twentieth Centuries** - inactive course.

**3620 Canadian Economic History to the End of the Nineteenth Century** - inactive course.

**3630 Canadian Economic History in the Twentieth Century** - inactive course.

**3650 Canadian Business History** - inactive course.

**3660 The Scientific Revolution** - inactive course.

**3665 History of Western Medicine** introduces students to the major topics and themes with which historians of medicine are currently engaged. These include the nature of doctor-patient relationships, perceptions of the body, professionalization, patterns of disease, and the development of European public health movements. The course traces the practice of medicine from ancient Greece to the present although the primary focus will be on the period from the eighteenth to the early twentieth century.

Prerequisite: At least 3 credit hours in history at the 2000 level or above.

**3675 Navies and Societies Since 1650** is an examination of the rise of modern navies since 1650 that places navies and naval decisions within broader national and international political, economic and social contexts.

Note: *Credit may not be obtained for both History 3675 and the former History 3822.*

**3680 North Atlantic Seafaring to 1850** studies the maritime mercantile development of the countries on the Atlantic littoral, 1650-1850.

**3690 North Atlantic Seafaring from 1850** - inactive course.

**3700 Art History: The Italian Renaissance** - inactive course.

**3701 Art History: The Renaissance Outside Italy** (same as Visual Arts 3701) examines the Renaissance outside Italy from the late fourteenth century and the international style through the sixteenth century.

**3710-3729 Special Topics in British History** are available only as part of the Harlow Campus Semester.

**3740-3750 Studies in Modern Social and Intellectual History** are selected studies in the history of modern ideas and society. Aspects to be studied will be announced in the History Department brochure.

**3760 Women in Western Society and Culture I** - inactive course.

**3770 Women in Western Society and Culture II** are selected themes in the history of women in the modern period with a focus on cultural attitudes toward women, demographic trends affecting women, the impact of changing economic roles, and the development of feminism.

Note: *Credit may not be obtained for both History 3770 and the former History 3761.*

**3780 Women in Medieval Europe, 500-1500** will look at medieval women in their social, political and religious contexts in order to understand women's lives in the past.

Prerequisite: At least 3 credit hours in History at the 2000 level or above.

Note: *Credit cannot be obtained for History 3780 and the former History 4006.*

**3800-3830 (Excluding 3822) Contemporary Problems in Historical Perspective** is an analysis of developments leading to a contemporary issue or problem selected each year or semester. Aspects to be studied will be announced in the History Department brochure.

Note: *Credit may not be obtained for both History 3803 and History 3016.*

**3840 Historical Methods** is an introduction to the methods and practices of history in the modern era. This course is compulsory for Honours students and Majors, including those intending to apply for graduate studies.

Prerequisite: Twelve credit hours in History.

Note: *Credit may not be obtained for both History 3840 and the former History 4801.*

**3860 Vernacular Architecture** (same as Folklore 3860 and Anthropology 3860) is an historical survey of vernacular architectural forms in various regions of North America, with attention to Newfoundland materials. Issues discussed include the relationship of house form and culture, the concepts of antecedents, diffusion, innovation, and evolution of building forms and technologies, and the siting of buildings in the landscape. Dwelling houses, outbuildings, churches and industrial vernacular architecture will be included.

**3870 An Introduction to the History of Western Architecture Since the Renaissance** introduces students to the history of architecture in the western world, beginning with the revival of classical forms in Renaissance Italy.

**3999 Quantitative Approach in Historical Writing** - inactive course.

**4000-4010 Special Topics in Ancient and Medieval History** are specialized studies in Ancient and Medieval history. Aspects to be studied will be announced in the History Department brochure.

**4100 History and Memory** (same as Folklore 4100) is a course which recognizes that memory is not one of the natural parts of ourselves, nor is remembering a way of connecting with a single reference point in a social reality outside ourselves. These things are socially determined. Starting here, this course is designed to have students reflect on what they know about the past and how they know about it. The class will examine how individual and social memory works, concentrating on particular historical contexts.

Note: *Credit may not be obtained for both History 4100 and the former History 4569.*

**4110-4130 Special Topics in North Atlantic History** are specialized studies in the history of the North Atlantic. Aspects to be studied will be announced in the History Department brochure.

**4210-4229 (Excluding 4214) Special Topics in North American History** are specialized studies in the history of North America. Aspects to be studied will be announced in the History Department brochure.

**4230 Special Topics in Newfoundland History I** are specialized studies in the history of Newfoundland to the mid-nineteenth century.

**4231 Special Topics in Newfoundland History II** are specialized studies in the history of Newfoundland since the mid-nineteenth century.

Note: *Credit may not be obtained for both History 4231 and Political Science 4731.*

**4232 Special Topics in Newfoundland History III** - inactive course.

**4240-4260 Special Topics in Canadian History** are specialized studies in Canadian history. Aspects to be studied will be announced in the History Department brochure.

**4310-4330 Special Topics in European History** are specialized studies in the history of Europe. Aspects to be studied will be announced in the History Department brochure.

**4360-4380 Special Topics in European History** are available only as part of the Harlow Campus semester.

**4410-4430 Historical Problems** are specialized studies in historical problems. Aspects to be studied will be announced in the History Department brochure.

**4480 Folklore and Oral History** (same as Folklore 4480) is a seminar course which deals with the uses of oral (and aural) sources, particularly those which have a traditional dimension, for the study of history. It will discuss the methods developed by Vansina, Dorson and others for evaluating the historical meaning of oral traditions in literate and non-literate cultures. The use of oral traditions in the study of traditional modes of life and work such as fishing and farming will be considered. The use of oral traditions in the study of social and political history will also be discussed.

**4520-4529 Special Topics in Economic and Mercantile History** are specialized studies in Economic and Mercantile history. Aspects to be studied will be announced in the History Department brochure.

**4560-4570 (Excluding 4569) Special Topics in Social and Intellectual History** are specialized studies in Social and Intellectual history. Aspects to be studied will be announced in the History Department brochure.

**4670-4690 Special Topics in Maritime History** are specialized studies in Maritime history. Aspects to be studied will be announced in the History

Department brochure.

**4730 Art History: Modern Art I Precursors to Modernism** (same as Visual Arts 4730) is an examination of the cultural, social, and political forces which, from 1750 to 1850, were to have a major impact on modernity and later modern art.

Prerequisites: Six credit hours in art history or permission of the chair of the Visual Arts Program.

**4731 Art History: Modern Art II Early Modernism** (same as Visual Arts 4731) is an examination of the various cultural and social forces between 1850 and 1914 which shaped the rise of the Modern movement.

Prerequisites: Six credit hours in art history or permission of the chair of the Visual Arts Program.

**4800 Historiography** is an introduction to the major historians and historiographical traditions of the West. This course is for Honours students and other selected students, including those intending to apply for graduate studies.

Prerequisite: Permission of the Head of Department

**4810 Documents Management** is an Introduction to the management of records and documents, both official and private.

**4821 Reading Course** is a directed reading course for Honours and selected students including those intending to apply for graduate studies. Readings will be taken from a list of works by historians, or social theorists whose works are related to history.

Prerequisite: Permission of the Head of Department.

**4822 Reading Course** is a directed reading course for Honours and selected students. The readings will be chosen in such a way as to supplement a student's knowledge of his/her area of specialization and, where appropriate, to prepare the student for the honours essay. If a student intends to complete History 4999, a proposal for the honours essay will be a requirement of the course.

Prerequisite: Permission of the Head of Department.

Note: *Credit may not be obtained for both History 4822 and the former History 4820.*

**4830-4850 Reading Courses** are directed reading courses for selected B.A. students. Students must receive approval of Department Head or delegate before registering for these courses.

**4999 Honours Essay**

Prerequisite: History 4822.

## 6.17 Law and Society

Program Co-ordinator: C. English, Department of History

The program listed below is an interdisciplinary program intended to encourage students to examine different facets of law and its role in society. It is neither a pre-law program nor one offering a certificate or qualification in legal studies. The minor program and courses will acquaint and confront students with different aspects of the history, philosophical basis, and role of law in modern society. The minor includes both courses which deal explicitly with law (e.g., Canadian Constitutional Law, International Law, History of Law, Criminal Justice), and courses in social and political theory and the role of law and its norms in diverse settings (e.g., S/A 3240 Regional Studies: Contemporary Native Peoples of Canada). Law and Society 2000 and Law and Society 4000 are intended to integrate the material and provide a common focus at both the beginning and the end of the program.

As is the case in any interdisciplinary program, it will be up to the students to ensure that they have the necessary prerequisites to complete the program. For purposes of entry into the courses offered by participating departments, heads will be asked to treat these students on the same basis as their own majors.

### 6.17.1 Regulations

A minor program in Law and Society will consist of a minimum of 24 credit hours in courses selected according to the stipulations below:

1. Candidates for the minor must complete a minimum of 30 university credit hours including Law and Society 2000 before applying for the program. The prerequisite for Law and Society 2000 is completion of at least 18 university credit hours.
2. Candidates should apply in writing to the Law and Society Committee through the Program Coordinator.
3. In addition to Law and Society 2000 and Law and Society 4000, students must complete 18 credit hours, with a maximum of 6 credit hours in courses from each participating department. At least 12 of the 18 credit hours must be completed in courses numbered 3000 or higher.

Anthropology 2260, \* 2492, \* 3100, \* 3240, \* 3320, \* 4030, 4450

History 4232 (the former 4214), 4810

Philosophy 4350, 4360

Political Science 2710, 3210, 3521, 3720, 4200

Russian 3910

Sociology 2260, \* 3100, \* 3240, \* 3290, 3320, \*3395

Law and Society 4900, 4901- 4909

\* indicates cross-listed courses

The normal departmental prerequisites are applicable, but Department Heads may waive course prerequisites in cases where alternate preparation can be demonstrated.

4. Law and Society 4000 is compulsory. Before registering for this course students must complete 18 of the 24 credit hours required for the minor, including Law and Society 2000. In exceptional circumstances, the Program Coordinator may waive this prerequisite.
5. Students majoring in one of the participating disciplines may not use courses counted toward their major to fulfil the Law and Society minor requirements; however, up to 6 additional credit hours from their major subject area, listed in 3 above, may be used to fulfil the requirements of the minor.

6. Up to 6 credit hours in Special Topics courses in Law and Society may be used to fulfil the requirements of the minor under regulation 3 above.

### 6.17.2 Course List

In accordance with Senate's *Policy Regarding Inactive Courses*, the course descriptions for courses which have not been offered in the previous three academic years and which are not scheduled to be offered in the current academic year have been removed from the following listing. For information about any of these inactive courses, please contact the Head of the Department.

**2000 Law and Society** is an introduction to law in Canadian society and the role which it has played in societies past and present.  
Prerequisite: Completion of at least 18 university credit hours.

#### 3010-3019 Special Topics in Law and Society

**3200 Women and the Law in Newfoundland History** (same as History 3200) examines how legal reforms addressed or challenged the values of the community. Students will investigate the various ways in which Newfoundland women interacted with the law and on occasion found themselves before a magistrate.

**4000 Multidisciplinary Perspectives on Law and Society** is an appreciation and understanding of those rules and activities termed legal which can be gained from a variety of disciplinary perspectives. The purpose of this seminar is to introduce students to the different ways in which law may be approached within the social sciences and humanities. The topic or topics to be discussed in a given semester will depend on the availability and participation of faculty from participating departments. Through seminar readings, discussions and research, students will gain a wider understanding of the role of law in society and of the diverse academic approaches for understanding it.  
Prerequisites: Law and Society 2000 and at least 15 credit hours in courses applicable to the minor.

**4900 Law and Society** (same as History 4232) are specialized studies in the development of law in Newfoundland.

Note: *Credit may not be obtained for Law and Society 4900 and either History 4232 or the former History 4214.*

#### 4901-4909 Special Topics in Law and Society

Prerequisite: Law and Society 2000.

## 6.18 Linguistics Programs and Regulations

### 6.18.1 General Degree

- Many courses formerly offered by the Department of Linguistics have been renumbered or renamed. Students who have taken Linguistics courses at Memorial University of Newfoundland may not obtain credit for renumbered or renamed courses which the student has already taken. Students should consult with an advisor in the Department of Linguistics to ensure that they are taking the appropriate courses.
- Prerequisites may be waived in special cases by the Head of the Department.
- Students majoring in Linguistics must complete 36 credit hours in Linguistics, which must include the six courses numbered 1103/2103, 1104/2104, 3000, 3100, 3104, 3201, 3500, plus 18 credit hours in courses chosen from 1100/2100, 2060, 2210, 3104, 3105, 3155, 3212, 3310, 3850, 4050-4059, 4100, 4110, 4150, 4201, 4210, 4350, 4400, 4500, 4700. Of these 18 credit hours, 9 must be at the 4000 level.

Notes: 1. *Students intending to pursue graduate work in Linguistics should include 3500, 4201 and at least one of 4100 and 4110 in their programs.*

2. *In planning a Major, students are required to consult with an advisor in the Department of Linguistics to ensure that their proposed program is possible within the constraints of course scheduling and prerequisites.*

### 6.18.2 Honours and Joint Honours Degrees

- See General Regulations for the Degree of Bachelor of Arts (Honours).
- An Honours degree in Linguistics must include 60 credit hours in Linguistics courses of which the following are required: 1103/2103, 1104/2104, 2210, 3000, 3100, 3104, 3201, 3500, 3850, 4100 (and/or 4110), 4201, 4999, and at least one of 4150, 4210, 4350, 4400, 4500, 4700. Students should choose courses in consultation with their Honours Essay supervisor, to ensure that the needs and interests of the individual candidate are met, and to take into account the availability of courses which the department is able to offer. The Honours or Joint Honours student must also meet a language requirement of 6 credit hours or the equivalent in a second language. Under very special circumstances the Head of the Department may prescribe 6 credit hours in advanced courses in English dialectology in place of the above second language requirement.
- Linguistics may also be combined with another subject or subjects to constitute a Joint Honours degree. The required courses listed above for the Honours degree, except for 4999, will also be required for any Joint Honours degree in Linguistics. A total of 48 credit hours in Linguistics, which may include 4999, is required for Joint Honours in Linguistics. Students should consult their Department of Linguistics advisor to ensure that they select courses which complement their other Honours Subject of Specialization.

### 6.18.3 Minor Programs

#### General Minor (8 courses, 24 credit hours)

- The following courses are required:

a. 1103/2103 and 1104/2104

b. Any 2 courses from the following list: 3000, 3100, 3104, 3201, 3500, 3850

c. An additional 4 courses selected from: 1100/2100, 2060, 2105, 2210, 3105, 3150, 3155, 3212 or 3220, 3310, 4100, 4110, 4150, 4201, 4210, 4310, 4350, 4400, 4500, 4700

For students taking the General Minor who want to specialize in careers related to linguistics, it is recommended that they choose 24 credit hours from the following sets of courses.

- Courses Recommended for Potential Speech Language Pathologists (choose 24 credit hours from the following):

Linguistics 1100/2100, 1103/2103, 1104/2104, 2210, 3000, 3100, 3104, 3155, 3201, 3500, 3850, 4150, and 4700.

The above list is intended for those who plan to study Speech Pathology at another university. Please note that Speech Pathology is not offered at this University. Students should also plan to meet the requirements of the program to which they will apply. These often include course work in Biology, Psychology, Statistics as well as other fields.

- Courses Recommended for French Majors (choose 24 credit hours from the following):

Linguistics/French 3302, 3310, 3311, 4310; Linguistics 1100/2100, 1103/2103, 1104/2104, 2210, 3000, 3100, 3104, 3150, 3155, 3201, 3500, and 3850.

- iii. Courses Recommended for English Linguistics (choose 24 credit hours from the following):  
Linguistics/English 2400, Linguistics/English 2401, Linguistics 1100/2100, 1103/2103, 1104/2104, 2210, 3000, 3100, 3104, 3105, 3155, 3201, 3212, 3500, 3850, 4100, 4110, 4210, Linguistics/English 4403, 4420, 4421.
- iv. Courses Recommended for Potential Teachers in Native and Northern Schools (choose 24 credit hours from the following):  
Linguistics 2060, a course on the structure of a Native Language of Canada (available in the series 1530-2023 or 4050 and 4051), plus Linguistics 1100/2100, 1103/2103, 1104/2104, 2210, 3000, 3100, 3104, 3105, 3150, 3155, 3201, 3500, 3850, 4150.

## 2. Focus area in Linguistics for B.Ed. (Primary/Elementary) Students

A minimum of 18 credit hours in Linguistics is required for students who are doing a focus area in the discipline. The program is as follows:

Linguistics 1100/2100, 1103/2103, 1104/2104, 2210, 6 credit hours in courses chosen from Linguistics 3000, 3100, 3104, 3105, 3150, 3155, 3201, 3212, 3500, 3850, including at least one 3000 level course. Students are urged to include more than the minimum number of linguistics-related courses in their program.

## 6.18.4 Course Descriptions

In accordance with Senate's *Policy Regarding Inactive Courses*, the course descriptions for courses which have not been offered in the previous three academic years and which are not scheduled to be offered in the current academic year have been removed from the following listing. For information about any of these inactive courses, please contact the Head of the Department.

**1100 Language and Communication** is a general and non-technical introduction to linguistic concepts which are important for understanding the nature of language, its change and its function for communication. Topics include: languages as structured systems; the systematicity of language change; the classification of languages into families and their geographical distribution; language, the brain, and language disorders; the acquisition of language; and human vs animal communication. (Intended for first-year students.)

Note: *Credit may not be obtained for both Linguistics 1100 and 2100.*

**1103 Introduction to Linguistics: Morphology and Syntax** is an introduction to the study of the meaningful components of words and sentences. This course will demonstrate the principles by which parts of words are organized into larger units (inflectional morphology and word-formation), and by which words pattern into phrases and sentences (syntax). Synchronic and diachronic data from English and several other languages will be analysed to illustrate how language is structured.

Note: *Credit may not be obtained for both Linguistics 1103 and 2103.*

**1104 Introduction to Linguistics: Phonetics and Phonology** is an introduction to the sounds of speech, their description (phonetics), organization (phonology), and interactions with morphology (morphophonology). The synchronic and diachronic patterns and regularities of language will be demonstrated through analysis of data selected from English and other languages.

Note: *Credit may not be obtained for both Linguistics 1104 and 2104.*

**1530-2023** are intended for fluent speakers of Innu-aimun or Inuttut who are planning to complete the Diploma in Native and Northern Education in Labrador. These courses are not normally offered at the St. John's campus.

### 1530 Reading and Writing in Innu-aimun I

Note: *Credit may not be obtained for both Linguistics 1530 and the former Linguistics 1030.*

### 1531 Reading and Writing in Innu-aimun II

Note: *Credit may not be obtained for both Linguistics 1531 and the former Linguistics 1031.*

### 2020 Introduction to Inuttut I

### 2021 Introduction to Inuttut II

### 2022 Issues in Oral Inuttut

### 2023 Reading and Writing in Inuttut

**2025-2060** are intended for students who want to learn an Aboriginal language spoken in Newfoundland and Labrador.

**2025 Introduction to Inuktitut I** - inactive course.

**2026 Introduction to Inuktitut II** - inactive course.

**2030 Introduction to Innu-aimun (Montagnais/Naskapi) I** - inactive course.

**2031 Introduction to Innu-aimun (Montagnais/Naskapi) II** - inactive course.

**2040 Introduction to Mi'kmaq I** - inactive course.

**2041 Introduction to Mi'kmaq II** - inactive course.

**2060 Aboriginal Languages of Eastern Canada** is an overview of the aboriginal languages of three language families of Eastern Canada: Eskimo-Aleut (Inuttut) and Algonquian (Innu-aimun, Mi'kmaq, Maliseet-Pasmaquoddy and Beothuk) and Iroquoian (Mohawk) with respect to both linguistic structure and current vitality. The history of language suppression

and revitalization efforts, within the context of the larger issues of minority language attrition and maintenance.

**2100 Language and Communication** is a general and non-technical introduction to linguistic concepts which are important for understanding the nature of language, its change and its function for communication. Topics include: languages as structured systems; the systematicity of language change; the classification of languages into families and their geographical distribution; language, the brain, and language disorders; the acquisition of language; and human vs animal communication..

Notes: 1. *Credit may not be obtained for both Linguistics 1100 and 2100. (Intended for students beyond first year.)*

2. *This course may qualify as a Research/Writing course. Consult each semester's Undergraduate Registration Procedures booklet for the R/W designation.*

**2103 Introduction to Linguistics: Morphology and Syntax** is an introduction to the study of the meaningful components of words and sentences. This course will demonstrate the principles by which parts of words are organized into larger units (inflectional morphology and word-formation), and by which words pattern into phrases and sentences (syntax). Synchronic and diachronic data from English and several other languages will be analysed to illustrate how language is structured.

Note: *Credit may not be obtained for both Linguistics 1103 and 2103.*

**2104 Introduction to Linguistics: Phonetics and Phonology** is an introduction to the sounds of speech, their description (phonetics), organization (phonology), and interactions with morphology (morphophonology). The patterns and regularities of language will be demonstrated through analysis of synchronic and diachronic data selected from English and other languages.

Note: *Credit may not be obtained for both Linguistics 1104 and 2104.*

**2105 The Wonder of Words** is an introduction to the structure of words. This course presents methods of linguistic analysis through an in-depth study of English word origins. The French, Latin, and Greek origins of technical and scientific words are studied, together with the ways that these words may change in structure, sound, and meaning. The course will also provide an introduction to etymology, to writing systems and transliteration, and to the use of dictionaries.

Note: *Credit may not be obtained for both Linguistics 2105 and the former 1101.*

**2210 Language in Newfoundland and Labrador: An Introduction to Linguistic Variation** is a general, non-technical introduction to the languages of Newfoundland and Labrador. Topics covered include the concept of variation within language, both regional and social; the chief causes of such variation, and some of its societal and educational consequences; a survey of the regional and social dialects of Newfoundland English, and their major features; an overview of languages in the province other than English, and their current situation.

Note: *This course may qualify as a Research/Writing course. Consult each semester's Undergraduate Registration Procedures booklet for the R/W designation.*

**2400 History of the English Language to 1500** - inactive course.

**2401 History of the English Language from 1500 to Modern Times** - inactive course.

**2700-2720 Special Topics in Linguistics: Introduction to Uncommonly Taught Languages** including the following:

**2700 Introduction to Irish Gaelic I**

**2701 Introduction to Irish Gaelic II**

**2702 Introduction to Japanese I**

**2703 Introduction to Japanese II**

**3000 Morphological Analysis** studies the meaningful parts from which words are built by using restricted data from a variety of languages. Practical work on selected languages will illustrate the wide range of notions which acquire formal expression in grammatical systems. Although previous knowledge of the languages to be discussed is not necessary, an important aspect of the course will be practical experience in analysing phenomena which are foreign to English. Discussion of languages taught at this University will be balanced with analysis of limited data sets from more

exotic languages. Comparison of the means by which smaller units are organized into words will make possible an elementary typology of the world's languages.

Prerequisites: Linguistics 1103/2103 and 1104/2104.

**3100 Generative Syntax** is an introduction to the syntactic theory developed by Chomsky, focusing on three essential notions: linguistic competence, universal grammar and linguistic parameters.

Prerequisite: Linguistics 1103/2103.

**3104 Phonetics** builds on the introduction to phonetics given in 1104/2104, and deals with the wide range of sounds that are used in human languages. On the practical side, the student will systematically learn to identify, symbolize and pronounce a large number of sounds. The theoretical work will concentrate on an understanding of the articulatory, acoustic and perceptual features of speech sounds. This involves the close examination of data from foreign languages chosen to illustrate the fact that languages differ widely in their selection and organization of speech sounds. It also involves study of selected regional differences in the pronunciation of English.

Prerequisite: Linguistics 1104/2104.

**3105 Issues in the Acquisition of English and the Adult Learner** (same as English 3105)

Prerequisites: English 2390, 3650; Linguistics 1104/2104; Education 2222; English 2010 is recommended.

**3150 Bilingualism: Linguistic, Cognitive and Educational Aspects** - inactive course.

**3155 Introduction to Language Acquisition** will examine a number of critical issues in the first and second language acquisition of syntax and phonology. Current generative approaches to first and second language acquisition will be covered, which will be exemplified with data from different languages. An introduction to phonological and syntactic speech disorders will also be offered.

Prerequisites: Linguistics 1103/2103 and 1104/2104.

**3201 Generative Phonology** will present the basic terms, concepts, and methods of Generative Phonology. Theoretical constructs surveyed will include distinctive feature theory and syllable structure. These constructs will be exemplified using phenomena observed in natural languages, including allophony, allomorphy, and processes such as assimilation and neutralization. Students will also be introduced to recent, constraint-based theories of phonology.

Prerequisites: Linguistics 1104/2104.

**3212 Language and Gender** is a survey of language and gender issues, including (i) the representation of males and females in English and other languages; (ii) stereotypes associated with male and female speech; and (iii) sex differences in language production.

Linguistics 2210 or Women's Studies 2000 are recommended.

**3220 Linguistics and Law** - inactive course.

**3302 History of the French Language** (same as French 3302)

**3310 Phonology and Morphology of French** (same as French 3310)

**3311 Introduction to General Linguistics: Aspects of French Linguistic Theory** - inactive course.

**3500 Historical Linguistics** will focus on: Genetic relationships between languages; the comparative method; language change found in phonetics/phonology, morphology and syntax; lexical and semantic change; the role of language and dialect contact; comparative and internal reconstruction; the typological and genetic classification of languages.

Prerequisites: Linguistics 1103/2103 and 1104/2104.

**3850 Semantics** is an introduction to the study of linguistic meaning. Word- and sentence-level semantics, grammatical meaning, pragmatics, and logical aspects of meaning.

Prerequisites: Linguistics 1103/2103 is required; Linguistics 3000 and 3100 are recommended.

**3950-3960 Special Topics in Linguistics**

**4010-4091** will focus on the linguistic structure of certain languages, and are designed to provide senior students with the opportunity of being exposed to a substantial part of the grammar of a language other than those regularly offered in the Faculty of Arts. One course in this series will be offered each year, subject to availability of instructor.

Prerequisites: Linguistics 1103/2103 and 1104/2104, or the permission of the instructor and the Head of the Department.

**4050-4054 Linguistic Structure of a North American Aboriginal Language** could study the following languages: Cree, Inuttut (Inuktitut), Innu-aimun (Montagnais/Naskapi), etc.

Note: *Except where an exemption is supplied by the head of the department, a student may not obtain credit for more than one course in the 4050-4054 series. Students may not obtain credit for any of the previously offered 4010, 4011, 4020, 4021, 4030, 4031, 4040, 4041 in addition to a course in the 4050-4054 series.*

**4055-4059 Linguistic Structure an Uncommonly Taught Language** could

study the following languages: Fijian, Modern Arabic, Classical and Vedic Sanskrit, or other exotic languages.

Note: *Except where an exemption is supplied by the head of the department, a student may not obtain credit for more than one course in the 4055-4059 series. Students may not obtain credit for any of the previously offered 4060, 4061, 4065, 4066, 4070, 4071, 4080, 4081, 4090, and 4091 in addition to a course in the 4055-4059 series.*

**4100 Morphosyntactic Analysis** is an analysis of a wide range of linguistic data in morphology and syntax. The course will focus on essential linguistic concepts in more than one theoretical framework, and on the nature of linguistic evidence. (Usually offered in alternate years).

Prerequisites: Linguistics 3000 and 3100.

Note: *Credit may not be obtained for both Linguistics 4100 and the former 4001.*

**4110 Selected Topics in Generative Grammar** is usually offered in alternate years.

Prerequisite: Linguistics 3100.

**4150 Language Acquisition II** provides an evaluation of the theoretical aspects of first and second language acquisition. Theories about the role of linguistic principles, learnability and the role of linguistic input are discussed, in light of research on the acquisition of English and other languages.

Prerequisite: Linguistics 3155.

**4151 Advanced Topics in Phonological Acquisition** - inactive course.

**4201 Phonological Theory** will familiarize students with current issues in phonological theory. Issues such as phonology in the lexicon, segmental and prosodic representations, the analysis of stress and tonal systems, as well as a comprehensive introduction to constraint-based approaches to phonology will be covered. Students will further develop their ability to analyse phonological data. (Normally offered every year in Winter semester).

Prerequisite: Linguistics 3201.

**4210 Sociolinguistics** studies the detailed patterns of variation found in any given speech community, and factors which co-vary with them; the various theoretical models proposed to account for such variability. As their major assignment, students will complete a carefully restricted sociolinguistic project. (Usually offered in alternate years).

Prerequisites: Linguistics 1103/2103, 2210 and 3104.

**4301 French Dialects, Patois and Argots** - inactive course.

**4310 The French Language in Canada** - inactive course.

**4350 General Romance Linguistics** - inactive course.

**4400 Historical and Comparative Linguistics** - inactive course.

**4403 Etymology: History of English Words** - inactive course.

**4420 English Dialectology I** - inactive course.

**4421 English Dialectology II** - inactive course.

**4500 Introduction to Field Methods** is data collection and organization for an unfamiliar language in a simulated field situation, including methods of elicitation, data filing, preliminary analysis, and hypothesis formation and testing. In this course, you will learn to apply theoretical concepts from all major Linguistics subdisciplines, including phonetics, phonology, morphology, syntax, and historical linguistics. (Usually offered in alternate years).

Prerequisites: Linguistics 3000, 3100, 3104, and 3201.

**4700 Experimental Phonetics** examines some empirical methods of studying the different stages of 'the speech chain' which links speaker to hearer, with special emphasis on the acoustic and perceptual stages. The source-plus-filter theory of speech production. A survey of the range of natural articulations and their acoustic effects. Some competing theories of speech perception. Acoustic versus perceptual bases for phonological features.

Prerequisite: Linguistics 3104, or permission of the Head of Department.

**4750 Selected Topics in Phonology**

**4751 Selected Topics in Morpho-Syntax**

**4752 Selected Topics in Semantics**

**4753 Selected Topics in Acquisition**

**4754 Selected Topics in Linguistic Variation**

**4900 and 4901 Independent Study** are courses that are open to advanced students wishing to do individual research in consultation with an advisor.

**4950-4960 Special Topics in Linguistics**

Prerequisite: Permission of the instructor.

**4999 Honours Essay**

## 6.19 Mathematics and Statistics

For Departmental Regulations and Course Descriptions, see Faculty of Science section of the Calendar.

## 6.20 Medieval Studies

Program Supervisor: Dr. W. Schipper, Department of English

A multi-disciplinary program in Medieval Studies is offered for candidates for the degree of Bachelor of Arts; it may be taken only as a second Major program in conjunction with a disciplinary Major, or as a Minor program.

The objective of the program is the integrated study through core courses of a historical and cultural period, the Middle Ages, here defined as the period between Antiquity and the Modern Age. Such an approach, coordinating the methods and subjects of several disciplines, mirrors the pluralistic and interreligious framework of the age and provides context for the study of a student's first Major.

### 6.20.1 Major Program

Students majoring in Medieval Studies shall discuss their program with the Program Supervisor or delegate.

Students electing Medieval Studies as their second Major shall complete a minimum of 36 credit hours in courses which shall include the following:

1. Medieval Studies 2000 and either Medieval Studies 2001 or Medieval Studies 2002
2. Six credit hours from Medieval Studies 3000, 3001, 3002, 3003, 3004, 3005 and 3006.
3. Six credit hours in courses at the 4000 level chosen from either Medieval Studies 4000-4020 or List A.
4. Classics 1120 and 1121.
5. An additional 12 credit hours in courses either from the Course List or on List A below normally to include at least 6 credit hours taken in courses at the 3000 level or above. Additional courses may be chosen in consultation with the Program Supervisor.
6. No more than 6 credit hours in courses counted for a student's first major may be counted towards the Major in Medieval Studies.

### 6.20.2 Minor Program

Students pursuing a minor in Medieval Studies shall discuss their program with the Program Supervisor or delegate.

Students electing Medieval Studies as a Minor shall complete a minimum of 24 credit hours in courses which shall include the following:

1. Medieval Studies 2000 and either Medieval Studies 2001 or Medieval Studies 2002
2. Six credit hours from Medieval Studies 3000, 3001, 3002, 3003, 3004, 3005 and 3006.
3. Three credit hours in courses at the 4000 level chosen from either Medieval Studies 4000-4020 or List A.
4. An additional 9 credit hours in courses either from the **Course List** or on **List A** below, normally to include at least 3 credit hours taken in courses at the 3000 level or above. Additional courses may be chosen in consultation with the Program Supervisor.
5. No more than 3 credit hours in courses counted for a student's major may be counted towards the Minor in Medieval Studies.

### 6.20.3 Course List

In accordance with Senate's *Policy Regarding Inactive Courses*, the course descriptions for courses which have not been offered in the previous three academic years and which are not scheduled to be offered in the current academic year have been removed from the following listing. For information about any of these inactive courses, please contact the Head of the Department.

**2000 The Cultural Legacy of the Middle Ages** will survey the formative cultures of the Middle Ages - Latin, Celtic, Arabic - as well as the rise of the new vernacular cultures, Germanic and Romance. Literary trends such as the reliance on authority, the emergence of national epic and the development of court literature will be studied. The course examines the interplay of all the arts - literature, music, art and architecture.

**2001 Medieval Europe to 1050** (same as History 2320) is a survey of the economic, social, political and cultural developments of the early Middle Ages.

**2002 Medieval Europe, 1050 to the Reformation** (same as History 2330) is a survey of the economic, social, political and cultural developments of Europe in the high and late Middle Ages.

**3000 Medieval Books** (same as English 3002, History 3000, Religious Studies 3000) is an examination of the development and role of the manuscript book during the Middle Ages. Topics covered will include book production and dissemination; authors, scribes and audiences; and various kinds of books (e.g. glossed Bibles, anthologies, books of hours, etc.) and their uses.

Prerequisite: Medieval Studies 2000, 2001 or 2002 or permission of the instructor.

Note: *Medieval Studies 3000 may be substituted for a Greek and Roman Studies course in both the Classics degree programs (Honours, Joint Honours and general degree) and the Greek and Roman Studies degree programs (Honours, Joint Honours and general degree).*

**3001 Art, Architecture and Medieval Life** (same as History 3020, Anthropology 3589, Folklore 3001) is an examination of the development of medieval art and architecture and of the ways in which they mirror various aspects of life in the Middle Ages. The course will include a discussion of art and architecture in the countryside, in the town, in the castle, in the cathedral and in the cloister.

Prerequisite: Medieval Studies 2000, 2001 or 2002 or permission of the instructor.

Note: *It is recommended, but not obligatory, that students should have successfully completed one of the following courses: Anthropology*

*2480, Folklore 1000 or 2000, History 2320/MST 2001, History 2330/MST 2002, MST 2000.*

**3002 Folklore in Medieval Society** - inactive course.

**3003 Christian Thought in the Middle Ages** (same as Religious Studies 3560) is a study of the development of Christianity in the West from the eleventh century to the eve of the Reformation, through an examination of its principal thinkers and the most significant societal forces and events: the crusades, the universities, monasticism, religious dissent, and mysticism.

**3004 Medieval Philosophy** - inactive course.

**3005 Medieval Latin** - inactive course.

**3006 Women Writers in the Middle Ages** (same as Women's Studies 3001 and English 3006) will study selections from the considerable corpus of women's writings in the Medieval period, as well as issues which affected women's writing. All selections will be read in English translation.

Note: *Credit may be obtained for only one of Medieval Studies 3006, Women's Studies 3001 and the former Medieval Studies 3351.*

**3710-3729 Special Topics in Medieval Studies** is available only as part of the Harlow Campus Semester.

**4000-4020 Special Topics in Medieval Studies** are seminars on such general, interdisciplinary or comparative subjects as, e.g., Popular Culture in the Middle Ages, The Medieval Stage, The Medieval Court, The Religious Orders, Women in Medieval Society, Medieval Universities, Scholasticism, Dante's Divine Comedy, Medieval Historiography, Arthurian Romance, Jewish Medieval Communities, Muslim Art and Architecture and The Byzantine World.

Prerequisite: Medieval Studies 3000 or 3001 or permission of the instructor.

**List A: Other Course Approved For Inclusion in Medieval Studies Major and Minor Programs Subject to the Foregoing Regulations**

Not all these courses may be offered each year; students should check with departments with regard to availability and prerequisites.

2000 level courses or equivalent	3000 level courses	4000 level courses
Anthropology 2480	Classics 3150, Religious Studies 3150	Biology 4270
Classics 1120	English 3021	Classics 4271
Classics 1121	English 3500	English 4403, Linguistics 4403
Classics 1130	English 3501	English 4500
Classics 1131	English 3600	English 4501
Classics 2200	English 3700	English 4600
Classics 2205	French/Linguistics 3302	English 4601
Classics 2300	German 3911	German 4300
Classics 2305	History 3011-3020	German 4301
English 2110	History 3780	History 4000-4010
English 2400, Linguistics 2400	History 3270, Classics 3270, Religious Studies 3270	
English 2600	Linguistics 3500	
English 2601	Religious Studies 3591	
French 2550		
German 2900		
German 2910		
History 2320 (same as MST 2001)		
History 2330 (same as MST 2002)		
Linguistics 2500		
Music 1002		
Music 2005		
Religious Studies 2130		
Russian 2900		

## 6.21 Newfoundland Studies

Program Supervisor: to be determined

A multi-disciplinary Minor program in Newfoundland Studies is offered to candidates for the Bachelor of Arts degree. The objective of the program is the study of Newfoundland society and culture through a variety of disciplinary approaches rather than the concentration upon a single discipline. This Minor program is an alternative to a Minor offered by a single department. Since the program draws upon courses in several departments, it is administered by an interdepartmental committee. The Program Supervisor will advise students upon the selection of courses in the Minor.

### 6.21.1 Regulations

1. To qualify for a Minor in Newfoundland Studies, a student shall complete a total of 24 credit hours in courses as follows:
  - a. Fifteen credit hours in courses on the following list and from at least four different Departments.
    - Anthropology 3850 (same as Folklore 3850), 3860 (same as Folklore 3860 and History 3860)
    - Economics 2070, 3070
    - Education 3571
    - English 3155
    - Folklore 2230 (same as S/A 2230), 2300, 3850 (same as Anthropology 3850) and 3860 (same as Anthropology 3860 and History 3860)
    - Geography 2290, 2495, 3490
    - History 3110, 3120, 3200 (same as Law and Society 3200), 3860 (same as Anthropology 3860 and Folklore 3860)
    - Law and Society 3200 (same as History 3200)



Linguistics 2210  
 Music 2021, 2022, 2023 (a maximum of 3 credit hours)  
 Political Science 3780  
 Religious Studies 3900, 3901  
 Sociology/Anthropology 2220, 2230 (same as Folklore 2230)

Note: *Religious Studies 3900/3901 deal with different periods and topics. Students can register in 3901 without having taken 3900.*

- b. Nine additional credit hours in courses chosen from the above list and/or from the following, including at least 3 credit hours chosen from courses at the 4000 level:

Anthropology 4280  
 Folklore 4310, 4400  
 French 4400 (same as Folklore 4400)  
 Geography 4301  
 History 4230, 4231  
 Linguistics 4220  
 Political Science 4731  
 Sociology 4240

Note: *Students should consult the Program Supervisor on the applicability of special topics and other courses that have a high level of Newfoundland and/or Labrador content. The Program Supervisor can then seek permission for the inclusion of such courses in the student's minor program.*

- c. Prerequisites: Normal departmental prerequisites will be required as laid down by the various Departments.

2. Up to 6 credit hours in courses counted for a student's Major Department may count towards the Minor, but these shall be in addition to the minimum course requirements for the Major.

## 6.22 Philosophy

### 6.22.1 General

Philosophy courses may be taken singly as general arts electives or as part of a Minor, Major, Honours or multidisciplinary program. Normally, Philosophy 1200/2200 is a prerequisite for all philosophy courses at the 3000 level and above, though all courses are open to any student as electives with the permission of the Head of Department. Philosophy 1600 is not required for further courses in philosophy, but is of particular value to students interested in the Social Sciences and Humanities.

### 6.22.2 Minor Program

The minor program in Philosophy consists of a minimum of 24 credit hours in courses which must be chosen in accordance with the following requirements:

1. Philosophy 1200 or 2200, Philosophy 2210 or 2220, Philosophy 2230 or 3400, Philosophy 2701 or 2702
2. A major author course i.e. one of 3730, 3740, 3800, 3840, 3850
3. An additional 9 credit hours in Philosophy courses

Notes: 1. *Students declaring a Minor in Philosophy may choose to have a program advisor by mutual agreement with a member of the Philosophy department.*

2. *Of the courses numbered 1001, 1003, 1600 and those numbered 2800-2810, not more than TWO may be counted towards the Minor.*

### 6.22.3 Major Program

The major program in Philosophy consists of a minimum of 36 credit hours in courses chosen in accordance with the following requirements:

1. Philosophy 1200 or 2200, Philosophy 2210, Philosophy 2220, Philosophy 2230 or 3400, Philosophy 2701 or 2702, Philosophy 3730 or 3740, Philosophy 3800 or 3840 or 3850, Philosophy 3910 or 3920 or 3940
2. One course in the 4700-4790 series
3. One course in the 4800-4890 series
4. An additional 6 credit hours in Philosophy courses

Notes: 1. *Students declaring a major in Philosophy must choose a program advisor in consultation with the Head of the Department and the faculty member concerned.*

2. *Of the courses numbered 1001, 1003, 1600 and those numbered 2800-2810, not more than TWO may be counted towards the Major.*

### 6.22.4 Honours Program

The full Honours program requires a minimum of 60 credit hours in Philosophy courses; Joint Honours requires a minimum of 45 credit hours in Philosophy courses. These must include:

1. Philosophy 1200 or 2200, Philosophy 2210, Philosophy 2220, Philosophy 2230 or 3400, Philosophy 2701 or 2702, Philosophy 3730 or 3740, Philosophy 3800 or 3840 or 3850, Philosophy 3910, Philosophy 3920 or 3940
2. One course in the 4700-4790 series
3. One course in the 4800-4890 series
4. An additional 3 credit hours in courses at the 4000 level
5. Either Philosophy 4998 or 4999
6. Candidates for Joint Honours must choose 4998\*
7. Candidates for full Honours may take 4999 only with permission of the Department.
8. Other Philosophy courses to a total of 60 credit hours for Full Honours, 45 credit hours for Joint Honours.

\* Candidates for Joint Honours who elect to fulfill the honours requirement in the other discipline are not required to take the Comprehensive Examination. (See General Regulations for the Honours degree of Bachelor of Arts)

### 6.22.5 Course List

In accordance with Senate's *Policy Regarding Inactive Courses*, the course descriptions for courses which have not been offered in the previous three academic years and which are not scheduled to be offered in the current academic year have been removed from the following listing. For information about any of these inactive courses, please contact the Head of the Department.

Some sections of Philosophy 1200, 1600, 2200, and 2800-2810 may qualify as Research/Writing courses for the B.A. Core requirements. Consult each semester's Registration Booklet for the R/W designation.

**1200 Introduction to Philosophy** is a general introduction to the study of Philosophy both as a contemporary intellectual discipline and as a body of knowledge. The course covers the main divisions, fundamental questions and essential terminology of Philosophy through a reading of classical texts. (It is a required course for further courses in Philosophy programs. It is intended for students in first year who have completed one semester of university education).

Note: *This course has no prerequisite.*

**1600 Philosophy of Human Nature** is an approach to philosophical thinking by way of analysis and critique of theories of human nature, classical and modern, and the world views associated with them.

Notes: 1. *This course has no prerequisite.*

2. *Credit may not be obtained for both Philosophy 1600 and the former Philosophy 1001.*

**2200 Introduction to Philosophy** is the same as 1200 above but offered to students beyond first year.

Note: *Credit may not be obtained for both 1200 and 2200).*

**2210 Logic** is an introduction to traditional and modern logic. Open in any year to all students wishing acquaintance with basic logical skills. No prerequisite.

**2220 Principles of Human Knowledge** examines various concepts of knowledge - empirical, rational, transcendental, systematic. Their metaphysical grounds and implications. The concept of scientific knowledge; real and abstract entities; objectivity and subjectivity.

**2230 Moral Philosophy** examines the sources and validity of ethical principles which underlie individual and social action.

**2701 History of Ancient Philosophy** (same as Classics 2701) is a survey of the origin and development of Western philosophy among the Greeks and Romans.

**2702 History of Modern Philosophy** is a survey of the development of Western philosophy since the 17th century.

Note: *Credit may be obtained for only ONE of 3700, 3701, 2702.*

**2710 Philosophy of Language and Mind** is a survey of philosophical thinking about human language and thought, and about how these phenomena relate to the rest of the natural world. Topics covered include the nature of language, the relations between thought and language, and the nature of consciousness.

**2800, 2804, 2805, 2806, 2808 and 2810 Contemporary Issues** discusses the philosophical dimensions of an area of practical concern such as: contemporary culture, professional ethics, leisure, education, the mass media, gender, war, and human rights.

**2801 Technology** examines concepts of technology and their ethical implications.

**2802 Mental Health Ethics** examines concepts of mental health and illness and their ethical implications.

**2803 Health Ethics** examines concepts of health and illness and their ethical application.

**2807 Biomedical Ethics and the Law** examines medical dilemmas from legal and ethical points of view.

**2809 Environmental Ethics** examines concepts of nature and their ethical implications.

Note: *Except with permission of the department, Philosophy 1200/2200 is a prerequisite for all Philosophy courses at the 3000-level and above.*

**3110 Elements of Symbolic Logic** examines techniques and topics in the logic of propositions, of predicates and of induction and probability. Normally the second course in logic.

**3120 Philosophy of Language** investigates various uses of language and its relationship to thought, as well as particular features of language, such as meaning, synonymy, reference, translation and interpretation.

**3150 Philosophy of the Natural Sciences** examines major issues in the origins, methods and philosophical implications of science. Science as a form of knowledge; its relation to metaphysics; to more general theories of knowledge. Science and values.

**3160 Philosophy of the Human Sciences** - inactive course.

**3400 Political Philosophy** examines leading philosophical ideas concerning the origin and justification of political institutions.

**3500 Philosophy of Religion** (same as Religious Studies 3500) examines the philosophical aspects of religious belief, religious language and theology.

**3600 Philosophy of the Humanities** examines the expression and interpretation in the humanistic disciplines: theology, history, art and literature, language. Philosophical Hermeneutics.

**3610 Philosophy and Literature** - inactive course.

**3620 Philosophy of Art** - inactive course.

**3730 Plato** examines selections from the works of the Greek "lovers of wisdom"-the first philosophers - particularly Plato.

**3740 Aristotle** examines the works and legacy of perhaps the most influential systematic thinker of all time.

**3760 Medieval Philosophy** - inactive course.

**3790 Late Medieval and Renaissance Philosophy** - inactive course.

**3800 Descartes** is a systematic introduction to the works and thought of the "father of modern philosophy".

**3820 Rationalism** is a study of rationalism in Descartes, Spinoza, Leibniz and of subsequent developments of this standpoint.

**3830 Empiricism** is a study of classical empiricism in the works of Locke, Berkeley and Hume and of later developments of this philosophical standpoint.

**3840 Hume** is a study of the work and influence of Hume on theories of knowledge, metaphysics and moral philosophy.

**3850 Kant's Theory of Knowledge** is an introduction to the work of one of the most influential thinkers of the modern era, concentrating on his theory of knowledge, particularly as stated in the *Critique of Pure Reason*.

**3851 Kant's Ethics** is an introduction to the work of one of the most influential thinkers of the modern era, concentrating on his ethics, particularly as stated in *The Foundations of the Metaphysics of Morals* and *The Critique of Practical Reason*.

**3860 Hegel** examines selections from Hegel's system with emphasis on the nature of dialectical and speculative philosophy and its enormous influence in the present time.

**3870 Utilitarianism** examines moral, political and jurisprudential themes in Bentham, J.S. Mill and their followers. Recent utilitarian theories.

**3880 Post-Idealist Thought** examines 19th century reactions to idealist systems, the critique of Metaphysics, the rise of Positivism.

**3890 Marxism** examines the political, social and historical theories of Marx and Engels and their later developments; themes in Marxist analysis of class and capitalism.

**3900 Process Philosophy** - inactive course.

**3910 Analytic Philosophy** examines selections from established texts in contemporary analytic philosophy: Russell, Carnap, Wittgenstein and others.

**3920 Phenomenology** is an introduction to the philosophy of Husserl and some of his followers, e.g. Heidegger, Merleau-Ponty.

**3930 Pragmatism** examines the pragmatist standpoint from Peirce to the present.

**3940 Existentialism** examines the philosophy and literature of Existentialism from Kierkegaard, Nietzsche and Dostoevsky to Sartre, de Beauvoir and Camus.

Note: *Credit may not be obtained for both 3980 and 3940.*

**3950 Recent Philosophy** - inactive course.

Note: *Except with permission of the department, students will not be admitted to 4000 level courses without having completed a minimum of 6 credit hours in courses at the 3000 level.*

**4100 Seminar in Logic and the Philosophy of Mathematics**

**4110 Seminar in Logic and the Philosophy of Mathematics** - inactive course.

**4150 Seminar in the Philosophy of Science**

**4160 Seminar in the Philosophy of Science** - inactive course.

**4200 and 4210 Seminar in the Philosophy of Mind** - inactive course.

**4250 and 4260 Seminar in Metaphysics and Epistemology**

**4300 and 4310 Seminar in Ethics**

**4350 and 4360 Seminar in the Philosophy of Law** - inactive course.

**4400 and 4410 Seminar in Political Philosophy** - inactive course.

**4450 and 4460 Seminar in the Philosophy of History** - inactive course.

**4500 and 4510 Seminar in the Philosophy of Religion** - inactive course.

the specialized moral interests of each student.

**4520 and 4530 Seminar in Philosophical Background to Literature** - inactive course.

**4998 Comprehensive Examination**

**4550 Seminar in the Philosophy of Language**

**4999 Honours Essay**

**4560 Seminar in the Philosophy of Language** - inactive course.

**5000 Instructional Field Placement in Applied Ethics** is a part-time, one semester period of practical work designed to provide experience in medical, psychiatric, environmental, or other similar settings. Students may be placed, e.g., in a government policy office or a hospital.

**4600 and 4610 Seminar in Aesthetics** - inactive course.

Note: *Credit for this course can be used only towards the Diploma in Applied Ethics.*

**4700-4790 Seminar in Special Authors and Texts**

**4800-4890 Seminar in Twentieth- and Twenty-First Century Philosophy**

**4900 Advanced Readings in Ethics** is an individualized course tailored to

## 6.23 Political Science

### 6.23.1 Organization of Courses

Political Science courses are divided into four levels to assist students in making an orderly progression in their study of various fields within the discipline.

1. Political Science 1000, 1010, and 1020 are basic courses introducing students to the study of politics. Political Science 1000 and 1010 place particular emphasis on Canadian Politics while Political Science 1020 stresses international issues. Any two of these courses are recommended to students interested in knowledge and skills useful for understanding politics and government and the context in which political decisions are made.
2. Courses at the 2000 level are designed to introduce the student to the Major areas within the discipline of Political Science: Political Theory (x0xx), (x1xx); International Politics (x2xx); Comparative Politics (x3xx), (x4xx); Political Behaviour (x5xx); and Canadian Politics (x7xx). These courses raise questions, survey substantive knowledge, and introduce methodological approaches useful to students going on to more advanced courses in these fields. Taken together these courses serve as a foundation for a Major program in Political Science. Individually, they are open to all students interested in exploring specific aspects of Political Science.
3. 3000-level courses deal with a wide range of topics in depth, and assume some previous knowledge of appropriate areas of Political Science or related disciplines.
4. 4000-level courses are advanced seminars, either bringing together several approaches or fields of knowledge within the discipline, or focusing on specific problems.

### 6.23.2 Prerequisites

1. No prerequisites will apply to Political Science courses unless specified. Students, however, are encouraged to ensure that they have adequate preparation for courses in which they intend to register.
2. Since Political Science 2710 and one of Political Science 2200 or 2300 are required for all majors, and 2710 is required for minors, it is strongly recommended that these courses be taken no later than in a student's second year.
3. Students should complete at least 6 credit hours in courses with the initial digit '2' before registering in a course with the initial digit '3'.
4. Students should complete at least 6 credit hours in courses with the initial digit '3' before registering in a course with the initial digit '4'.
5. Students are strongly encouraged to consult with their faculty advisor prior to registration in each semester.

### 6.23.3 Requirements for General Degree

1. To qualify for a B.A. degree with a Major in Political Science, a student must, in addition to meeting the general requirements, complete at least 42 credit hours in courses offered by the Department, including:
  - a. Political Science 1000, 1010, or 1020 are recommended as first courses for any student interested in majoring in Political Science. No more than two of these courses may be counted toward the 42 credit hours in Political Science required for a Major.
  - b. Students must complete a minimum of 12 credit hours in courses at the 2000-level including Political Science 2710 and 2711, and Political Science 2200 or 2300; and
  - c. a minimum of 24 credit hours in courses numbered 3000 or above including at least 6 credit hours in courses at the 4000 level.

Note: *First year history courses provide an important foundation for students majoring in Political Science. The Department recommends that majors and prospective majors take introductory history courses in their first year of study.*

2. A Minor program in Business Administration is available for Political Science majors. For details, see the regulations for the Faculty of Business Administration.

### 6.23.4 Honours Program

An Honours degree may be required for admission to post-graduate programs in Political Science, and may be useful preparation for law and other professional fields. Students considering an Honours program are encouraged to apply to the Department early, preferably during their third or fourth terms. Students are admitted to the Political Science Honours Program in accordance with University and Faculty of Arts Honours Degree regulations. To qualify for the B.A.(Hons.) Degree in Political Science, a student must complete at least 60 credit hours in courses offered by the department.

1. Political Science 1000, 1010, or 1020, are recommended as first courses for any student majoring in Political Science. No more than two of these courses may be counted toward the 60 credit hours in Political Science required for an Honours degree.
2. Students must complete a minimum of 15 credit hours in courses at the 2000-level including Political Science 2010 or 2500, Political Science 2710 and 2711, and Political Science 2200 or 2300;
3. Political Science 3010, 3011 and 3100 and
4. At least 15 credit hours in courses numbered 4000 and above, including Political Science 4950 and Political Science 4951 (Honours Essay I and II)

Students must follow the Guidelines Governing Honours Essays provided in Political Science 4950 and available from the Head of the Department.

### 6.23.5 Requirements for Minors

To qualify for a Minor in Political Science, a student must complete at least 24 credit hours in courses offered by the Department.

1. Political Science 1000, 1010, or 1020 are recommended as first courses for any student interested in completing a minor in Political Science. No more than two of these courses may be counted toward the 24 credit hours in Political Science required for a Minor.
2. Students must complete Political Science 2710 and at least one of Political Science 2000, 2010, 2200, 2300, or 2500; and
3. At least 12 credit hours in courses numbered 3000 or above including at least 3 credit hours in courses at the 4000 level.

### 6.23.6 Faculty Advising

Students who intend to Major or Minor in Political Science must inform the Head of the Department. Each Major student is assigned a Faculty Advisor, who is responsible for planning with the student an overall program, and for approving a course program for each term. The Department stresses the importance of regular consultation between student and Faculty Advisor as the most effective way to assure a rational and relevant academic program within the broad outlines of the University and Departmental regulations.

### 6.23.7 Course List

In accordance with Senate's *Policy Regarding Inactive Courses*, the course descriptions for courses which have not been offered in the previous three academic years and which are not scheduled to be offered in the current academic year have been removed from the following listing. For information about any of these inactive courses, please contact the Head of the Department.

**1000 Introduction to Politics** is an introduction to basic concepts in the study of politics, emphasizing the Canadian system of government and its relationship with the Canadian society.

**1010 Canadian Political Problems** is the analysis of the operation of the Canadian political system through close examination of three selected policy problems, such as poverty in Canada, Canadian-United States relations and French Canada.

**1020 World Political Problems** is an introduction to contemporary issues in world politics. The course will examine selected issues and the manner in which these reflect interests and ideologies and the larger political and economic context in which they occur.

**2000 Introduction to Political Thought** is a survey of the most important political thinkers and schools of political thought in the Western political tradition. The course will ordinarily cover political thinkers from Plato to Marx and include a selection of contemporary political ideologies.

**2010 Power, Democracy, and Politics** examines the relationship between power and democracy. Focusing on the role of the citizen in politics, it introduces students to research and writing in political science. Questions to be considered: Who counts? Who is in charge? What difference does it make? This course qualifies as a Research/Writing course.

**2200 Introduction to International Politics** is an examination of the "building blocks" of international politics including determinants, means, processes and ends. Emphasis is on the post-1945 period.

**2300 Introduction to Comparative Politics** is an introduction to comparative politics focusing on the differences and similarities among a variety of countries and systems.

**2350 Europe in the 20th Century** (same as European Studies 2000 and History 2350) examines the social, economic, and political changes from 1918 to the present including the collapse of monarchies, the emergence of mass politics, fascism and totalitarianism, World War II, postwar reconstruction and the welfare state, European integration, and Europe in the postwar economic and political order. The course will examine Britain, France, Germany, and Italy, and particularly the European Union. Special attention will be paid to the demise of class politics and the impact of postwar affluence.

**2500 Introduction to Political Behaviour** is an introduction to classics and controversies in the understanding of political behaviour. Topics include political culture and individual behaviour, public opinion, voting and elections, political participation, psychological dimensions of activism, and social movements. Besides regular lectures, several workshops are planned to encourage students' participation. This course qualifies as a Research/Writing course

**2710 Introduction to Canadian Politics I** is an introductory survey of the structure, operation, and inter-relationships of the institutions of government at the federal level in Canada. Topics to be examined include the constitution, federalism, parliament, the executive, and the judiciary.  
Note: *Credit may not be obtained for either Political Science 2710 or 2711 and the former Political Science 2700.*

**2711 Introduction to Canadian Politics II** is an introductory survey of the Canadian political process. The course will explore the linkages between Canadian society and political institutions. Topics to be examined include political culture, political parties, the electoral system, voting behaviour, interest groups, the mass media and politics, protest movements, and elites and social classes.  
Note: *Credit may not be obtained for either Political Science 2710 or 2711 and the former Political Science 2700.*

**3010 Qualitative Interview Techniques in Political Science** is an introduction to applied qualitative research in Political Science. A learning-

by-doing approach is adopted. At the beginning of the semester, a common research project is proposed. Students collect their own original data and analyze them with appropriate software. This intensive form of investigation is presented as a component of the scientific research process.

**3011 Survey Techniques in Political Science** is an introduction to applied quantitative research in Political Science. A learning-by-doing approach is adopted. Moving from the data collected in Political Science 3010, students learn how to construct survey research instruments, conduct a random survey and analyze the data with appropriate software. A final report integrates the data collected with the various components of the scientific method.  
Prerequisite: Political Science 3010.

**3020 Marxism and its Variants** - inactive course.

**3030 Political Sociology** - inactive course.  
Prerequisite: Political Science 2300, 2500 or Sociology 2000.

**3100 Political Theory I** examines selected political theory from Plato to Rousseau. The theme of the course is the development of liberal democratic theory.  
Prerequisite: Any 2000 level course in Political Science.

**3110 Political Theory II** examines selected political theory from Tocqueville to the present. The theme of the course is the crisis in liberal democratic theory.  
Prerequisite: Any 2000 level course in Political Science.

**3140 Feminist Political Theory** - inactive course.

**3190-3194 Special Topics in Political Theory**

**3200 Comparative Foreign Policy** is an introduction to the comparative analysis of foreign policy, with special reference to selected great powers.

**3210 International Law** is an introduction to international law concerned with the interaction of the political and legal systems. Topics discussed are sources, agreements, membership, recognition, territory, jurisdiction, immunities, state responsibility, and force and war.

**3220 International Organizations** examines the purposes, structures, and effectiveness of contemporary international organizations. Emphasis will be placed on the United Nations "family". An exposure to several others of the more than two hundred existent IGO's will also be given.

**3250 International Political Economy** is defined as the zone of interaction between world politics and international economics. International political economy includes such topics as trade politics; sovereign debt and structural adjustment; national foreign economic policies; the politics of economic integration; transnational corporations; hegemony and long cycles; official development assistance; and dependency. The selection of topics presented will vary from semester to semester.  
Prerequisite: Political Science 2200.

**3291 The European Union** is an examination of the European Community as an emergent transnational form of governance. The course will consider the origins of the Community, the operation of its institutions, its transformation from Common Market to European Union, and the ways in which EC politics impinges on national-level politics.  
Prerequisite: Political Science 2200 or 2300.

**3292-3296 Special Topics in International Relations**

**3300 European Politics** is a comparative study of government and politics in selected states of Western Europe. Emphasis will be on parties, institutions, and policy-making, particularly the ways in which states manage their economies.  
Prerequisite: Political Science 2300.

**3310 American Political System** will examine the governmental process in the United States including the role of parties and interest groups. It will also examine select contemporary problems.  
Prerequisite: Any 2000 level course in Political Science.

**3320 Comparative Politics: State and Politics in the USSR and the Commonwealth of Independent States** is designed as a general survey of politics and government in the Soviet Union and the Commonwealth of Independent States. The development of Soviet and post-Soviet politics will

be analyzed with special attention being paid to political leadership and its relation to the promotion of political change and continuity.

**3330 Eastern European Politics** will focus upon politics in East-Central and Southeastern Europe. Particular attention will be paid to developments in Czechoslovakia, Poland, Hungary, and Yugoslavia.

**3340 Women and Politics** - inactive course.

**3360 The Military and Politics** - inactive course.

**3370-3389 Special Topics in Contemporary Europe** is available only as part of Harlow campus semester.

**3391-3395 Special Topics in Comparative Politics**

**3410 African Politics** - inactive course.

**3420 Asian Politics** - inactive course.

**3430 Latin American Politics** is an analysis of the forces influencing politics in contemporary Latin America with particular emphasis being given to those factors promoting political change. No prior knowledge of Latin America is assumed.

**3510 Public Opinion** - inactive course.

**3511 Political Communication** - inactive course.

**3521 Law and Society** will review traditional theories about law, discuss their inadequacies, and consider the benefits of a policy-oriented approach to the study of the role of law in society. The concept of law as a process of authoritative decision will be used to examine the function of the judicial authority.

**3531 Political Parties** - inactive course.

**3540 Principles of Public Administration** is an outline of major theoretical concepts in the field of public administration. The emphasis is on organization theory and practice, administrative decision-making, and organization development. Usually run as a seminar course. This course is relevant to any student contemplating a career in public employment.

**3590-3594 Special Topics in Political Behaviour**

**3700 Parties and Elections in Canada** - inactive course.

**3710 Intergovernmental Relations in Canada (I)** - inactive course.

**3711 Fiscal Federalism in Canada** (same as Economics 3711) examines: (I.) Federal-provincial-municipal fiscal relations in Canada: intergovernmental tax agreements and equalization payments. (II.) Co-operative federalism: shared-cost programs and opting-out arrangements. (III.) Intergovernmental bargaining in the following issue areas: tax reform; administration of justice; welfare policy; post-secondary education. Prerequisites: Political Science 2710 or Economics 2010 and 2020.

**3720 Canadian Constitutional Law** uses a casebook approach to examine critical issues of Canadian Constitutional Law. The development of the Canadian Constitution and processes of judicial review, as well as the legal development of federalism and protection of civil rights, are examined in detail.

**3730 Introduction to Policy Analysis** is a survey of the major frameworks for the study of public policy, including decision-making theories. The course examines different stages in the policy-making process, such as policy initiation, priorities planning, choice of governing instruments, implementation and evaluation in relation to the objective and normative factors in Canadian policy environment, key institutions, dominant interests, and political leadership.

**3741 Public Administration in Canada** is an introduction to public administration, history of the public service in Canada, an examination of the structure and functioning of contemporary federal and provincial governments. Topics covered include cabinet organization, financial and personnel management, collective bargaining, and bilingualism.

**3751 State and Economic Life in Canada** - inactive course.

**3760 Canadian Foreign Policy** will discuss the factors which contribute to the making of Canadian Foreign Policy and the process by which it is made. Several case studies will be discussed, for example: Canada and the international law of the fisheries; Canada and NATO; Canada and peacekeeping.

**3770 Provincial Politics** is a comparative study of politics in selected Canadian provinces. Consequences of varying historical and cultural contexts will be examined with special attention to parties and movements, leadership styles, and orientations to the Canadian federation.

**3780 Newfoundland Politics** is a study of the political process in Newfoundland. Topics may include electoral behaviour and attitudes, the party system, leadership styles, the consequences of federalism, and public administration.

**3790 Local Government and Politics in Canada** is an examination of the theory, structure and operation of local governments in Canada, with particular emphasis on Newfoundland. Recent proposals for reform and the politics of implementing regional government and financial reorganization

will be examined.

**3791-3795 Special Topics in Canadian Politics**

**4000 Internship** is a part-time, normally unpaid placement in government, voluntary organizations, political parties, unions, or other institutions involved in public affairs. The number of openings varies and admission to this course is selective and competitive. Placements are for twelve weeks at eight hours per week, in addition to regularly scheduled class meetings. Prerequisites: Fifteen credit hours in Political Science courses with a B70 average and third-year standing (minimum 60 credit hours). Note: *Credit may not be obtained for both Political Science 4000 and Political Science 3900.*

**4112 Critical Theory and Politics** - inactive course.

**4113 Contemporary Democratic Theory** will examine alternative conceptions of the foundations of democracy. Theorists to be considered include F. Hayek, R. Nozick, J. Rawls, R. Dworkin, and M. Walzer. Prerequisite: Political Science 3100 or 3110 or 3140.

**4200 Special Topics in International Law** is a research seminar on contemporary Canadian legal problems. Each semester will focus on one problem, e.g., Northern sovereignty, fishing zones, pollution, control of the sea.

**4210-4219 Special Topics in International Politics** are in-depth research of timely international concerns. Each semester the emphasis will be on a specific crisis situation, such as the Mid-East conflict or topical problems of disarmament, foreign aid, or trade relationships.

**4230 Theories of International Relations** is an examination of the approaches and frameworks used in the study of international relations, such as idealism, realism, systems, simulation, and empirical models. Approaches will be examined through the use of case studies. Note: *Credit may not be obtained for both Political Science 4230 and the former Political Science 3230.*

**4301 Preconditions of Democracy** - inactive course.

**4310 Comparative Federalism** will examine theories of federalism along with the development and operation of federalism in selected nation states.

**4313 The Politics of Contemporary Welfare States** is a comparative study of the politics of contemporary welfare states. The emphasis will be on the policies of welfare states and the political forces which shape them. Prerequisites: Political Science 2300 plus one Political Science course numbered at the 3300 level or permission of the instructor. Note: *Credit can not be obtained for Political Science 4313 and the former Political Science 3301.*

**4350 The State and the Economy** - inactive course.

**4390-4395 Special Topics in Comparative Politics**

**4450 State and Society in the Third World** will examine the development of state structures in the third world, particularly the bureaucracy and the military, in relation to social and economic change; social bases of political conflict, including class, ethnicity, religion, and region; and political processes, including elections, patronage, and military action. Alternative theoretical paradigms will be reviewed in light of current evidence.

**4460 Refugees and Politics** focuses on the way in which political considerations affect the creation, conceptualization, reception, care and resettlement of displaced persons. Emphasis on changes in the nature of refugeeism and the conceptual and material responses to these changes. Note: *Credit may not be obtained for Political Science 4460 and the former Political Science 4608.*

**4480-4485 Special Topics in Political Development**

**4500-4505 Special Topics in Political Behaviour**

**4604-4613 (Excluding 4608) Special Topics in Political Science**

**4620-4624 Directed Readings in Political Science**

**4708-4719 Special Topics in Canadian Politics** is an analysis in depth of a particular aspect of Canadian government and politics.

**4730 Public Policy in Newfoundland** is a study of public policy in Newfoundland. Examination of the formation, implementation and impact of policies in one or more of the following areas: fisheries, resources, industrial development, agriculture, social policy.

**4731 Political Economy of Newfoundland** - inactive course.

**4740 Political Protest and Reform** applies principles derived from the theoretical literature on political protest to reform movements in Canada and other settings. Both broadly based movements and single issue movements will be considered.

Note: *Credit may not be obtained for both Political Science 4740 and the former Political Science 4703.*

**4750 Regionalism in Canadian Politics** is an examination of the economic, social, and institutional determinants of regionalism and the ways in which these forces have shaped decision-making in Canada. Emphasis on the various models and frameworks used to study regionalism.

**4770 Politics in Atlantic Canada** - inactive course.

**4780 Research Seminar in Newfoundland Politics** requires students to participate in research projects dealing with selected aspects of Newfoundland politics. Topics to be considered include the legislature and the executive, the civil service, interest groups, parties, elections and political recruitment.

**4790 Public Policy in Canada** is an examination of the relationship between public policy development in Canada and changes in the policy environment. Policy areas to be studied include economic growth and stabilization, social security, economic regulation, criminal justice, education, human rights, and cultural survival and development.

**4901 Honours Tutorial** - inactive course.

**4950 Honours Essay I** requires students to prepare a research proposal

and drafts of at least one section of the honours essay. Students writing the honours essay are expected to meet regularly with their supervisor and to participate in occasional colloquia on research design.

Prerequisites/Co-requisites: Permission of the Head of the Department.

Note: *Credit may not be obtained for Political Science 4950 and the former 490A.*

**4951 Honours Essay II** requires students to complete the writing of their honours essay. Students writing the honours essay are expected to meet regularly with their supervisor and to participate in occasional colloquia on their research.

Prerequisites: Completion of Political Science 4950 with a minimum grade of 70%.

Note: *Credit may not be obtained for Political Science 4951 and the former 490B.*

## 6.24 Psychology

For Departmental Regulations and Course Descriptions, see Faculty of Science section of the Calendar.

## 6.25 Religious Studies

- Courses in Religious Studies are designed for students who wish to study religion as an academic discipline. They are open to all students on the same basis as are other courses in the Faculty of Arts. They are recommended for
  - students who wish to gain an understanding of the essential teachings and beliefs of one or more of the major religions;
  - students who are interested in careers for which a knowledge of religious thought and practice is useful; and
  - students who are interested in exploring this field as an area of scholarly interest and human concern.
- Those who plan to teach religion in the schools should complete a major or minor under the degree of Bachelor of Arts or a concentration in Religious Studies under the degree of Bachelor of Education (Primary/Elementary).
- Religious Studies 1000, 1010, 1020, 1021, 1022, 1032, and 1200 are basic courses which introduce students to the academic study of religion. Religious Studies 1040 and 1041 (Introduction to Chinese) and Religious Studies 1050 and 1051 (Introduction to Biblical Hebrew) are courses which fulfil the language requirement in the Faculty of Arts.
- Courses at the 2000 level represent a more focused level of study. Courses are generally of two types: the first introduces specific religious traditions, and the second introduces religious topics or issues. All courses at the 2000 level are introductory and open to any student interested in the subject.
- Courses at the 3000 and 4000 level in Religious Studies deal with the subject matter in greater depth and assume some previous knowledge.
- Unless otherwise specified, Religious Studies courses do not have prerequisites. Students who register in a 3000- or 4000- level course are encouraged, however, to make sure that they have adequate preparation for that course, preferably by having completed a first- or second-year course in the field.
- Students majoring in Religious Studies should plan their program in consultation with a representative of the Department.

### 6.25.1 General Degree

#### 6.25.1.1 Major in Religious Studies

- A minimum of 36 credit hours in courses in Religious Studies is required. Students must complete at least one course from each of the three following groups:
  - 2013, 2050, 2051, 2130, 2140, 3000, 3031, 3060, 3091, 3150, 3200, 3210, 3251, 3265, 3272, 3276, 3305, 3310, 3510, 3535, 3560, 3591, 3900, 3901.
  - 2400, 2410, 2415, 2420, 2425, 2430, 3401, 3411, 3412, 3431, 3432.
  - 2610, 2810, 2811, 2812, 2820, 2830, 3640, 3650, 3680, 3810, 3811, 3820, 3830, 3831, 3850, 3860.
- At least 18 credit hours of course work must be at the 3000 level or above. Students may choose from among any of the Religious Studies 3000-level courses, but it is recommended that they take a variety of courses from among the following fields of specialty:
  - Biblical Studies (3031, 3060, 3091, 3200, 3210, 3251, 3265, 3272, 3276)
  - Judaism (3305, 3310, 3315, 3320)
  - Christian Thought and History (3000, 3150, 3510, 3535, 3560, 3591, 3900, 3901)
  - Asian Religions (3401, 3411, 3412, 3431, 3432)
  - Religion and Culture (3810, 3811, 3820, 3830, 3831, 3850, 3860)
  - Ethics (3500, 3640, 3650, 3680).
- With the exception of the language courses (1040, 1041, 1050, 1051), no more than two 1000-level courses can be counted as credit towards a major.

#### 6.25.1.2 Minor in Religious Studies

- A minimum of 24 credit hours in courses in Religious Studies is required, including at least 9 credit hours in courses at the 3000 level or above.
- With the exception of the language courses (1040, 1041, 1050, 1051), no more than two 1000-level courses can be counted as credit towards a minor.

#### 6.25.1.3 Concentration in Religious Studies (Bachelor of Education Primary/Elementary)

A minimum of 18 credit hours is required, including Religious Studies 2051, at least 3 credit hours from 1020, 2013, 2130, or 2140, and at least 6 credit hours at the 3000 level or above.

## 6.25.2 Honours Degree

Students planning to do further work in Religious Studies should bear in mind that an Honours degree is the normal requirement for admission to Graduate Schools. Students intending to do an Honours Degree of Bachelor of Arts with a Major in Religious Studies must

comply with the General Regulations for Honours Degrees, and must complete at least 60 credit hours in Religious Studies courses including Religious Studies 4998 (a comprehensive examination in the area of their specialization) or 4999 (Honours Essay). Candidates for Honours may also be required to do courses in a further subject area.

Candidates for Honours should arrange their program at the earliest opportunity, normally before the beginning of their fifth semester at the University.

Candidates will normally be required to have a reading knowledge of a language basic to their area of specialization.

In each case the program of studies leading to an Honours degree will be determined in consultation with the Head of the Department of Religious Studies, or delegate, keeping in mind the needs and interests of the individual candidate.

Candidates whose area of specialization requires a knowledge of Greek must complete Classics 1130 and 1131. In such cases these courses may be substituted for 6 of the 60 credit hours required for an Honours degree in Religious Studies.

### 6.25.3 Joint Honours Degree in Religious Studies and Another Major Subject

The attention of students is drawn to the possibility of doing a Joint Honours program that includes Religious Studies as one of the Major subjects. Such a program may be arranged in consultation with the Head of the Department of Religious Studies and the Head of the other Department concerned.

### 6.25.4 Course List

In accordance with Senate's *Policy Regarding Inactive Courses*, the course descriptions for courses which have not been offered in the previous three academic years and which are not scheduled to be offered in the current academic year have been removed from the following listing. For information about any of these inactive courses, please contact the Head of the Department.

**1000 The Religions of the World** is an introduction to the basic beliefs and practices of the world's great religions.

Note: *Credit may not be obtained for both Religious Studies 1000 and the former Religious Studies 2010.*

**1010 Religion in the Modern World** - inactive course.

**1020 Christianity in Western Civilization** is an introduction to Christianity and its place in the history of Western Civilization through examples from Early Christianity, the Reformation, and the Modern Period.

**1021 Apocalypse: The End Times in Thought, Action, and Imagination** will explore the many ways in which Judaism and Christianity have anticipated and imagined the end times. Attention will be given to Jewish and early Christian notions of the Messiah and his reign, the end of the world, and the impending judgment, as well as how Christianity has coped repeatedly with the delay of the end and how millennial thought and action have affected people during periods of social and natural crises. The role of millennial expectations in our modern era and why the apocalypse is once again a powerful image in religion, film, and literature will also be covered.

**1022 Jesus in Film** is a study of how Jesus is represented in modern film. The course explores the continuing impact that the Jesus of history and faith has had on modern western culture. The course will examine such films as *The Greatest Story Ever Told*, *The Robe*, *The Gospel According to St. Matthew* (by Pasolini), *Jesus Christ Superstar*, *Jesus of Montreal*, *The Last Temptation of Christ*, *The Life of Brian*, *The Passion of the Christ*, *The Newfoundland Passion* (video of the Squires' Paintings).

**1032 Introduction to Asian Religions and Culture** is a broadly based survey course introducing students to the religions, culture, and societies of Asia. Traditions explored may include those of India (Hinduism, Buddhism, Sikhism, Jainism), China (Daoism, Confucianism, Buddhism), Japan (Shinto, Zen Buddhism), and Korea.

**1040 Introduction to Chinese (Mandarin) I** will introduce students to the basics of Chinese vocabulary, characters, and grammar. Mandarin Chinese, the official dialect of China, Taiwan, and Singapore, will be taught. This course is not intended for native speakers.

Note: *Credit may not be obtained for both Religious Studies 1040 and the former Religious Studies 4904.*

**1041 Introduction to Chinese (Mandarin) II** is a continuation of Religious Studies 1040. At the end of this course students should know over a hundred Chinese characters, which should enable them to read basic texts and carry on a simple conversation. This course is not intended for native speakers.

Prerequisite: Religious Studies 1040.

Note: *Credit may not be obtained for both Religious Studies 1041 and the former Religious Studies 4911.*

**1050 Introduction to Biblical Hebrew I** is designed to introduce students to the elements of Biblical Hebrew in order to prepare them for reading the Hebrew Bible/Old Testament in the original. The emphasis will be upon learning the basic grammar and syntax of Biblical Hebrew.

Note: *Credit may not be obtained for both Religious Studies 1050 and either the former Religious Studies 3700 or the former Religious Studies 4900.*

**1051 Introduction to Biblical Hebrew II** is a continuation of Religious Studies 1050. The emphasis will be upon the reading of selected Hebrew texts.

Prerequisite: Religious Studies 1050.

Note: *Credit may not be obtained for both Religious Studies 1051 and either the former Religious Studies 3701 or the former Religious Studies*

4901.

**1200 Introduction to the Bible** is an introduction to the Bible in English translation. This course introduces the Bible's role as a textual foundation in western religion and culture. The course explores the basic story line, characters, themes, and motifs found in the Bible, with an eye to their impact on western civilization.

**2013 Introduction to Christianity** is a study of the Christian tradition, its development and variety. The course will include an examination of the beliefs and practices of both Eastern and Western Christianity and a study of the main differences among the major Western denominations.

**2050 Introduction to the Old Testament** is an introduction to the historical background, literary structure, and content of the Old Testament. Emphasis will be placed on the authorship and dating of the various texts that comprise the Old Testament, as well as on major themes, figures, and events. This course may qualify as a Research/Writing course. Consult each semester's registration materials for the R/W designation.

**2051 Introduction to the New Testament** is an introduction to the history and literary structure of the documents comprising the New Testament. Emphasis will be placed on the major themes found in these documents and on the distinctiveness of approach of the individual writers.

**2130 Christianity from the First Century to the Middle Ages** explores the historical development of the principal doctrines of Christianity from the period of the Early Church to the Middle Ages. Topics will include the doctrine of the Trinity, the doctrine of the Person of Christ, the nature of the Church, the doctrine of the sacraments, and early and medieval speculation on the nature of Heaven and Hell.

**2140 Christianity from the Reformation to the Present** explores the radical religious, ethical, and intellectual changes and challenges that brought about the modern world we live in: the Reformation, the Enlightenment, the Romantic Period and Pietism, and Secularism. This course may qualify as a Research/Writing course. Consult each semester's registration materials for the R/W designation.

**2302 Readings in New Testament Greek** - inactive course.

**2330 Introduction to Judaism** is an exploration of Judaism from its beginnings to the modern era. This course introduces students to the basic beliefs and practices of the Jewish faith.

**2340 Introduction to Islam** is a study of the religion of Islam in its historical and contemporary manifestations; Muhammad, the Qur'an, Islamic sects, relations with Judaism and Christianity; trends and developments in contemporary Islamic thought and practice.

Note: *Credit may not be obtained for both Religious Studies 2340 and the former Religious Studies 3340.*

**2350 Religious Institutions** (same as Sociology/Anthropology 2350) explores psychological, anthropological, and sociological approaches to the nature of religion. Comparative study of religious institutions and beliefs, calendrical feasts and solemnities, the nature of sacrifice and the sacred, religious roles and hierarchies, ritual innovation and revitalization.

**2400 Introduction to Buddhism** is a study of the history of the Buddhist tradition in India and China, the development of the main lines of Buddhist thought, and the nature of the Chinese transformation of Buddhism.

Note: *Credit may not be obtained for both Religious Studies 2400 and the former Religious Studies 3400.*

**2410 Introduction to Hinduism** involves a study of the religious thought and history of India, the literature of Hinduism, the major thinkers in Hindu philosophy, and the role of Hinduism in the culture and society of India.

Note: *Credit may not be obtained for both Religious Studies 2410 and the former Religious Studies 3410.*

**2415 Gods and Goddesses of Hinduism** is focused on myth, iconography and ritual of Hindu gods and goddesses from the ancient to the contemporary period. The course will explore fundamental assumptions of Hindu theistic traditions in popular practice and in formal religious institutions.

**2420 Introduction to Chinese Philosophy and Religion** is an introduction to the principal forms of tradition to emerge in China. This course examines the origins and development of Confucianism, Daoism, Moism, and Legalism. After exploring the social and historical conditions that gave rise to them, the course will explore their continuing development and role in Chinese society.

**2425 Contemporary Issues in Chinese Religion and Culture** is an examination of religion in modern China and the Chinese diaspora in Taiwan, Singapore, and North America. Special attention will be paid to religious beliefs, practices, and institutions and the way in which modern attitudes have been framed by the past.

Note: *Credit may not be obtained for both Religious Studies 2425 and the former Religious Studies 3425.*

**2430 Introduction to Japanese Religions** is an examination of the nature and development of Shinto, the history and characteristics of the major sects of Japanese Buddhism, and the origins and importance of the New Religions of the 19th and 20th centuries, especially Tenrikyo and Soka Gakkai.

Note: *Credit may not be obtained for both Religious Studies 2430 and the former Religious Studies 3430.*

**2610 Introduction to Religious Ethics** is an introduction to religious ethics through the systematic study of selected writers and issues in biomedicine, human sexuality, and social justice. Possible topics for discussion include euthanasia, abortion, poverty, and unemployment.

Note: *Students who have successfully completed both Religious Studies 2600 and Religious Studies 2601 may not receive credit for 2610.*

**2800 Women in Western Religions** is an examination of the attitudes toward, and roles of, women in the Western religions, including prehistoric traditions, Judaism, Christianity, and Islam. Contemporary evaluations of these traditions from the point of view of women will also be considered.

**2801 Women in Eastern Religions** is an examination of the history of women in the traditions of Hinduism, Buddhism, Confucianism, Taoism, and folk traditions in Asia. The modern status of women in Asia and its relationship to traditional religious ideas will also be studied.

**2810 Religion and Modern Culture** is an historical examination of the impact of science on religion in Western culture. Particular emphasis will be placed on such developments as the scientific revolution, the rise of modern technology, and the emergence of modern scientific theories.

**2811 Introduction to Contemporary Religious Movements** is an introduction to contemporary religious movements in the west, including modern witchcraft, Neo-pagan religions, Mother Earth Spirituality, UFO religion, and the New Age Movement.

**2812 Religion and Popular Culture** will focus on the portrayal and treatment of religion in popular culture and will examine some of the ways in which religious and mythic themes are expressed in such pop culture forums as television shows, films, music, mass-market fiction, and material culture.

**2820 Cults and New Religious Movements** is an introduction to the origins, beliefs, and practices of such well-known groups as Scientology, the Unification Church ("the Moonies"), and ISKCON ("the Hare Krishnas"), and to suicide groups such as the People's Temple, Heaven's Gate, and the Solar Temple. The course will introduce students to issues within the academic study of cults and new religious movements and to the debate surrounding the brainwashing/deprogramming controversy.

**2830 Religion and Popular Music** is an introduction to the study of religious themes in popular music. The course will explore the influence of religious music on popular music and song and examine the role of music and song in the expression of religious themes.

**3000 Medieval Books** (same as Medieval Studies 3000, English 3002, History 3000) is an examination of the development and role of the manuscript book during the Middle Ages. Topics covered will include book production and dissemination; authors, scribes and audiences; and various kinds of books (e.g. glossed Bibles, anthologies, books of hours, etc.) and their uses.

Prerequisite: Medieval Studies 2000, 2001 or 2002 or permission of the instructor.

**3010 Greek Religion** (same as Classics 3010) is a study of the role of religion in the private and public life of the Greek world.

Note: *Students may not receive credit for Religious Studies/ Classics 3010 and the former Religious Studies/Classics 3121.*

**3020 Roman Religion** (same as Classics 3020) is a study of the role of religion in the private and public life of the Roman world.

Note: *Students may not receive credit for Religious Studies/ Classics 3020 and the former Religious Studies/Classics 3121.*

**3031 The Book of Genesis** introduces students to one of the founding texts of western culture, the book of Genesis. Special attention will be paid to the role of myth, human origins, values, and political institutions.

Note: *Credit may not be obtained for both Religious Studies 3031 and the former Religious Studies 3030.*

**3053 Anthropology of Religion** - inactive course.

**3060 The Prophets of Israel** is a study of the prophets through the relevant books of the Old Testament. Problems of text and interpretation will be discussed in relation to selected passages, but the general approach will be

to bring out the creative genius and radical implications of the prophetic movement as a whole.

**3091 Visions of Human Suffering in the Hebrew Bible** introduces students to the universal problem of human suffering as it is depicted in various biblical books. Special attention will be placed on the book of Job, but notions of suffering in the Psalms, Jeremiah, Proverbs, Ecclesiastes, and some apocryphal literature will also be considered.

Note: *Credit may not be obtained for both Religious Studies 3091 and the former Religious Studies 3090.*

**3150 Early Christian Thought: The First Five Centuries** (same as Classics 3150) is an advanced study of selected themes and personalities in Christian thought and literature from the second to the sixth centuries. Particular attention will be given to the controversies centering on the doctrines of the Trinity and the Person of Christ.

**3200 Jesus: His Life and Teaching** is a study of the ministry and thought of Jesus of Nazareth as contained in the Gospels and other New Testament writings. Attention will be given to the methods and conclusions of recent scholarship as applied to his principal teachings and to the study of the historical Jesus.

**3210 Paul and His Writings** is a study of the Pauline writings and an appraisal of the contribution to Christianity of his mission and theology on the basis of New Testament and other relevant material. Particular attention will be given to such related themes as salvation, reconciliation, grace, and justification.

**3251 The Gospel of John** is an examination of the Gospel of John and the community which produced it. Special attention will be given to the place of the Gospel in the history of early Christianity.

**3265 Ethics and the New Testament** - inactive course.

**3270 Christianity and the Roman Empire** (same as Classics 3270 and History 3270) is a study of the relationship between Christianity and the Roman Empire from the first to the fourth century.

**3272 Bible, Culture and Interpretation** examines ways in which the Bible has been interpreted from the beginnings of Christianity to the present.

Note: *Credit may not be obtained for both Religious Studies 3272 and either the former Religious Studies 3271 or the former Religious Studies 4200.*

**3276 Contemporary Issues and the Bible** examines the relevance of the Bible to such issues as the environmental crisis, emergent global capitalism, and technology and freedom.

Note: *Credit may not be obtained for both Religious Studies 3276 and the former Religious Studies 3275.*

**3305 The Religion of Ancient Israel** is an exploration of the religious thought and institutions of the kingdoms of Israel and Judah in their cultural and historical contexts from their beginnings to the sixth century B.C.E. The course introduces students to the religious beliefs, practices, and institutions of these two kingdoms prior to their destruction and prior to the development of Judaism in the post-exilic period.

Note: *Credit may not be obtained for both Religious Studies 3305 and the former Religious Studies 3050.*

**3310 Judaism at the Beginning of the Christian Era** will explore the developments in Jewish thought, institutions, beliefs, and practices during the time when Greek and Jewish cultures encountered one another and in which Jesus of Nazareth lived.

Note: *Credit may not be obtained for both Religious Studies 3310 and the former Religious Studies 3220.*

**3315 The Development of Modern Judaism** - inactive course.

**3320 Mysticism in Judaism and Islam** is a study of the origins, development, and importance of mysticism in the Jewish and Muslim traditions. In Judaism, the course will include a survey of Merkabah mysticism, the Qabbalah, and Hasidism. In Islam, it will include an examination of the two major streams of Muslim mysticism (Sufism) - the "drunken" and the "sober" - and the development of the Sufi Orders.

**3401 Zen, Buddhist Meditation, and Buddhist Psychology** examines the relationship between meditation and theories of human psychology in Buddhism from its origins to its formulation in Zen.

**3411 Hindu Mythology: The Ramayana** is a study of one of the most influential Epics of Hinduism, the story of Rama, the perfect king of a golden age. The course examines various versions of the narrative from Buddhist to sectarian Hindu, the Hindu and Indian values expressed through the story, and the Epic's place in Indian politics and in drama and visual art of India and the Hindu diaspora.

**3412 The Teachings of the Upanishads** is an in-depth examination of some of the principal Upanishads, foundational texts for Hindu religious philosophy and techniques of meditation. The course also examines classical and modern interpretations of these texts.

**3431 Readings in Daoism: The Laozi and the Zhuangzi** is a course in the critical reading of the two most important texts in Daoism, the *Laozi* and the *Zhuangzi*.

Note: *Credit may not be obtained for both Religious Studies 3431 and either the former Religious Studies 3420 or the former Religious Studies*



3422.

**3432 Confucius and Confucianism** beginning with Confucius and China, explores the growth and impact of Confucianism on East Asian society through an examination of its major writings.

Note: *Credit may not be obtained for both Religious Studies 3432 and either the former Religious Studies 3420 or the former Religious Studies 3421.*

**3500 Philosophy of Religion** (same as Philosophy 3500) explores the philosophical aspects of religious belief, religious language, and theology.

**3510 Christianity in the Reformation Era** is a study of Christian thought and practice in the Reformation era. This course will examine both Protestant and Catholic efforts at reform from the late Middle Ages to the seventeenth century.

**3535 Christianity in the Modern Era** - inactive course.

**3560 Christian Thought in the Middle Ages** (same as Medieval Studies 3003) is a study of the development of Christianity in the West from the eleventh century to the eve of the Reformation, through an examination of its principal thinkers and the most significant societal forces and events: the crusades, the universities, monasticism, religious dissent, and mysticism.

**3591 Christian Mysticism** is a study of the origins and development of the mystical tradition in Christianity from the fathers of the early Church to contemporary spirituality. The course will examine representative writers and writings from both the Western Christian tradition and Eastern Orthodoxy.

**3640 Religion and Bioethics** is an examination of the religious ethics of health care in the light of foundational concepts of bioethics. Topics to be discussed will include the relation of religion and medicine, as well as specific issues such as abortion, euthanasia, and genetic engineering.

**3650 Religion and Social Justice** is a study of social justice issues that arise from an investigation of economic and political systems from the perspective of religious ethics. Topics addressed may include environmental ethics, ecofeminism, gender equity, pacifism, civil disobedience, poverty, and social welfare questions.

**3680 Religion and the Problem of Evil** - inactive course.

**3810 Modern Interpretations of Religion** is a study of modern attempts to analyze, interpret, and reassess the place and significance of religion in human life. Attention will be given to thinkers such as Nietzsche, Marx, Freud, Sartre, Otto, Eliade, and Tillich.

Note: *Credit may not be obtained for both Religious Studies 3810 and the former Religious Studies 3531.*

**3811 Contemporary Alternative Spirituality** is an in-depth examination of one or more forms of contemporary alternative spirituality. Students will study the writings of practitioners of alternative spirituality, as well as social-scientific studies of alternative spiritual groups. Religious movements to be explored include African-American alternative spirituality, Mother Earth and Creation spirituality, Neo-paganism, the New Age Movement, UFO spirituality, and contemporary witchcraft.

**3820 Religion and the Arts** (same as Visual Arts 3820) is an examination of the role of art in the expression of religious ideas, together with a study of specific religious themes and concerns in one or more of the following: literature, film, music, painting, sculpture, and dance.

**3830 Religion, Science and Technology** is a study of the encounter between religion and modern science and technology in terms of its impact on the understanding of human nature and values. The implications of scientific methods and theories for religion will be considered together with reflections on science and technology by religious thinkers.

**3831 Religious Themes in Contemporary Songwriting** is a study of religious themes in contemporary songwriting through the in-depth examination of the work of a selection of contemporary songwriters. The course will explore how religious questions and themes are handled in contemporary song and explore how song as an artistic medium expresses religious meaning. Songwriters to be explored may include the following: Bob Dylan, Bob Marley, Joni Mitchell, Leonard Cohen, Van Morrison, Tori Amos, Nick Cave, Alanis Morissette, Julie Miller, the Louvin Brothers, the Stanley Brothers, Hank Williams, etc.

**3850 Religion and Healing** examines the links between sickness and sin, healing and faith which are found in many religious traditions. From aboriginal spiritualities to contemporary Christian faith healing, attempts to conceptualize and treat illness within spiritual frameworks are found cross-culturally. This course examines these links and also explores the relationship between religious healing systems and Western biomedicine

and the difference between disease and illness, healing and curing.

**3860 Implicit Religion: The Sacred in Secular Places** is an in-depth examination of the concept of implicit religion. The course will explore the concept of "the sacred" through an examination of the ideas of such theorists as Eliade, Turner, and Bailey and will examine the claims of some Religious Studies scholars that the sacred can be found in secular contexts.

**3900 Religion in Newfoundland and Labrador: Beginnings** is a study of religion and its role in Newfoundland society from the seventeenth century to the middle of the nineteenth century. Attention will be given to the origin, growth, and consolidation of the Anglican, Roman Catholic, Methodist, Moravian, and Congregational churches.

**3901 Religion in Newfoundland and Labrador: The Nineteenth and Twentieth Centuries** is a study of religion and its role in Newfoundland society from the middle of the nineteenth century to the present. The course will include the history of the Anglican, Roman Catholic, United (Methodist), Congregational, and Presbyterian churches in Newfoundland and the establishment and social significance of the Pentecostal movement and the Salvation Army.

**4201-4230 Biblical Studies: Special Subjects** are courses which will be offered at the discretion of the Department. They are designed to provide an opportunity for students majoring in Religious Studies or doing a strong concentration of courses in the area to pursue advanced study under tutorial supervision.

Prerequisite: Departmental permission.

**4300-4330 World Religions: Special Subjects** are courses which will be offered at the discretion of the Department. They are designed to provide an opportunity for students majoring in Religious Studies or doing a strong concentration of courses in the area to pursue advanced study under tutorial supervision.

Prerequisite: Departmental permission.

**4460 Folk Religion** (same as Folklore 4460) is an examination of folk responses to organized religion, surveying the religious forms and interpretations not specifically delineated by Theology. Areas of focus include: folk religious concepts of space and time; religion and healing; witchcraft and the devil; religious folk art and music; religious verbal art; the role and power of the holy person; the saint system; community social activities sponsored by the church. A discussion of some current popular religious movements will also be included. Attention will be given to material in the MUN Folklore and Language Archive, and research based on field data will be encouraged.

Note: *Credit may not be obtained for Religious Studies 4460 and the former Religious Studies 4240.*

**4500 and 4510 Seminar in the Philosophy of Religion** - inactive course.

**4700-4730 Christian Thought and History: Special Subjects** are courses which will be offered at the discretion of the Department. They are designed to provide an opportunity for students majoring in Religious Studies or doing a strong concentration of courses in the area to pursue advanced study under tutorial supervision.

Prerequisite: Departmental permission.

**4801-4830 Religion, Ethics, and Modern Culture: Special Subjects** are courses which will be offered at the discretion of the Department. They are designed to provide an opportunity for students majoring in Religious Studies or doing a strong concentration of courses in the area to pursue advanced study under tutorial supervision.

Prerequisite: Departmental permission.

**4902-4910 (Excluding 4904) Language Studies: Special Subjects** are designed to provide students with some basic knowledge of the languages necessary for studying the original texts of the major world religions. The languages presently offered through the Department are Mishnaic Hebrew, Aramaic, Coptic, Pali, Tibetan, Japanese, Manchu, Arabic, and Chinese. These courses will be offered at the discretion of the Department. They are designed to provide an opportunity for students majoring in Religious Studies or doing a strong concentration of courses in the area to pursue advanced study under tutorial supervision.

Note: *In addition to those languages mentioned above, courses in Latin and New Testament Greek are available from the Department of Classics and courses in Sanskrit from the Department of Linguistics.*

**4998 Comprehensive Examination for Honours Students** will be based on a program of assigned reading related to the general subject area of the candidate's dissertation.

**4999 Honours Essay for Honours Students**

## 6.26 Sociology

### 6.26.1 Programs in Sociology

The following undergraduate programs are available in the Department:

1. Major or Honours in Sociology
2. Joint Honours in Sociology and Another Major Subject
3. Major or Honours in Sociology/Anthropology

4. Minor in Sociology
5. Minor in Sociology/Anthropology

### 6.26.2 Admission to Honours Program

Admission to the Honours program in the Department of Sociology is competitive and selective. Students who wish to enter this program must submit an "Application for Admission to Honours Program" form to the department.

To be accepted into the Honours program, a student must not only meet the criteria laid out in the Regulations for the Honours Degree of Bachelor of Arts, but must normally have obtained a cumulative average of at least 75% in 18 credit hours in courses in Sociology which must include Sociology 3040 and 3150.

### 6.26.3 General Information and Prerequisites

Sociology 1000 or 2000 are prerequisites for all further Sociology courses except 2250 and those cross-listed with the Department of Anthropology. Credit is not given for both Sociology 1000 and 2000. Before taking 3000-level courses, students must have taken at least 6 credit hours in courses below the 3000 level. To take courses at the 4000 level, students must have previously taken at least 9 credit hours in courses at the 3000 level.

The following courses, cross-listed with the Department of Anthropology and identified by the prefix "S/A", are also taught at the introductory level: 2200, 2210, 2220, 2230, 2240, 2260, 2270, 2280, and 2350. A minimum of two of these courses is prerequisite to further cross-listed courses. These courses are open to be taken as first courses or may be taken to follow up a departmental introductory course.

### 6.26.4 Major

#### Major Options.

A student majoring in the Department may elect one of two options: 1. Sociology; 2. Interdisciplinary Studies in Sociology and Anthropology. The interdisciplinary option is for students whose major interests lie in areas which overlap departmental boundaries. An interdisciplinary curriculum of courses is available. These courses are recommended for a) students who are interested in an interdisciplinary Sociology/Anthropology Major; b) students majoring in either Sociology or Anthropology, wishing to broaden their disciplinary perspective; c) students in other fields interested in exploring, from an interdisciplinary perspective, specific problem areas in the Social Sciences. The courses in this option are clearly indicated by the designation S/A before the course number. All students must meet the requirements listed under General Degree Regulations, Regulations for the General Degree of Bachelor of Arts. Under these regulations a minimum of 36 credit hours in Sociology courses are required with appropriate added selections from other departments. Specific regulations for each option are:

1. **Sociology Option:** Students wishing to Major in Sociology must complete Sociology 1000 or 2000, Sociology 3040, Sociology 3150, and at least 6 credit hours in Sociology at the 4000 level from the courses listed in Table 1 below. No more than an additional 6 credit hours in courses below the 3000-level may be counted toward the Major. The remaining courses, for the minimum of 36 credit hours required for the Major, may be selected from any Sociology and S/A offerings at the 3000 and 4000 levels.
2. **Interdisciplinary (S/A) Option:** Students wishing to Major in this option must complete at least 24 credit hours in S/A courses, plus a minimum of 12 credit hours in courses selected from offerings in Sociology, Anthropology, or S/A. Specific requirements are under the Sociology/Anthropology Interdepartmental Studies Program.

### 6.26.5 Minor

#### Minor Option.

A Minor in Sociology requires completion of Sociology 1000 or 2000, Sociology 3040, 3150, at least 3 credit hours from Sociology courses at the 4000 level, listed in the Table below, and 12 credit hours in other Sociology or S/A courses.

Note: *Students majoring in either Anthropology or Sociology cannot elect to Minor in the S/A Program. Likewise, S/A Majors cannot elect either Anthropology or Sociology as a Minor.*

**Sociology courses that can be used to fulfill the 4000 level requirements for the Major and Minor in Sociology Table**

4040	4094	4101	4104	4107	4130	4170	4210	4240
4071	4095	4102	4105	4108	4150	4204	4212	4600
4092	4098	4103	4106	4120	4160	4206	4230	4995

### 6.26.6 Honours

Honours students are required to complete at least 60 credit hours in courses in Sociology and S/A, including all courses prescribed for the Major in Sociology, and either Sociology 4995 or 4996, and must meet the requirements outlined in the Regulations for the Honours Degree of Bachelor of Arts.

### 6.26.7 Course List

In accordance with Senate's *Policy Regarding Inactive Courses*, the course descriptions for courses which have not been offered in the previous three academic years and which are not scheduled to be offered in the current academic year have been removed from the following listing. For information about any of these inactive courses, please contact the Head of the Department.

Note: *S/A course descriptions may be found in this Calendar under the Sociology/Anthropology Interdepartmental Program. An S/A course carries the same Sociology credit as a Sociology course.*

**1000 Introduction to Sociology** - inactive course.

**2000 Principles of Sociology** is an introduction to the concepts, principles, and topics of Sociology. The course is a prerequisite to most departmental courses.

Note: *Credit may not be obtained for both Sociology 1000 and 2000. (Open*

*to first year as well as all other students).*

**2100 Social Inequality** introduces the subject of social inequality and stratification, examines social inequality in historical perspective, reviews major theories about social inequality, and considers key social developments in contemporary societies in the area of social inequality.

**2110 Economy and Society** examines the role played by economic conditions in social life, reviews the historical evolution and present nature of socio-economic systems, and explores various theoretical issues such as materialist conceptions of society and the impact of technology.

**2120 Technology and Society** is an examination of the role of technology in society. Topics may include the emergence of modern technological society, the impact of new technologies on social organization and culture, and the institutionalization of science and the production of scientific knowledge. The course also explores the ideological functions of science and technology in advanced industrial societies as well as the question of "the domination of nature".

**2200 Communities (S/A)** (see Sociology/Anthropology Interdepartmental Studies Program)

**2210 Communication and Culture (S/A)** (see Sociology/Anthropology Interdepartmental Studies Program)

**2220 Labrador Society and Culture (S/A)** (see Sociology/Anthropology Interdepartmental Studies Program)

**2230 Newfoundland Society and Culture (S/A)** (see Sociology/Anthropology Interdepartmental Studies Program) Cross listed with Folklore 2230.

**2240 Canadian Society and Culture (S/A)** (see Sociology/Anthropology Interdepartmental Studies Program)

**2250 Changing World** is a sociological analysis of contemporary world issues and social problems.

**2260 War and Aggression (S/A)** (see Sociology/Anthropology Interdepartmental Studies Program)

**2270 Families (S/A)** (see Sociology/Anthropology Interdepartmental Studies Program)

**2280 The City (S/A)** (see Sociology/Anthropology Interdepartmental Studies Program)

**2350 Religious Institutions (S/A)** (see Sociology/Anthropology Interdepartmental Studies Program) Cross listed with Religious Studies 2350.

**2610 Socialization** - inactive course.

**3030 Political Sociology** (same as Political Science 3030) is an introduction to the sociological foundations of political life. Topics to be examined include voting behaviour, comparative power systems, ideologies, mass movements, parties, voluntary associations, and bureaucracies. Attention is given to the concepts of class, status, command, power, authority, and legitimacy.

**3040 Introduction to the Methods of Social Research** has as objectives: (1) to introduce basic concepts underlying research in the social sciences, and (2) to make students familiar with some techniques that are useful in the analysis of a wide range of sociological data and that represent a good foundation for later study of more advanced techniques.

**3100 Dominance and Power (S/A)** (see Sociology/Anthropology Interdepartmental Studies Program)

**3110 Social Organizations** - inactive course.

**3120 Social Psychology** examines sociological perspectives on social psychology: the physiological and psychological basis of sign and symbol use, the context and emergence of self, identity, role, encounters, social relationships, altercasting.

**3140 Social Movements (S/A)** (see Sociology/Anthropology Interdepartmental Studies Program)

**3150 Classical Social Theory** is an introduction to the work of major 19th- and early 20th-century social theorists including Marx, Durkheim, Weber and Freud.

**3160 Modern Social Theory** is an exploration of selected topics from issues in contemporary social theory, including theories of feminism, the state, the environment, culture, organization, and communication. Prerequisite: Sociology 3150.

**3180 Minority Groups** examines the nature of minority group status in society and various examples of minority groups in past and present societies, reviews theoretical perspectives on minority groups, and explores various aspects of the relationship between minority groups and the rest of society (formerly Sociology 3304).

**3200 Population** - inactive course.

**3210 Persistence and Change in Rural Society (S/A)** (see Sociology/Anthropology Interdepartmental Studies Program)

**3220 Work and Society (S/A)** (see Sociology/Anthropology Interdepartmental Studies Program)

**3230 Urban Sociology** - inactive course.

**3240 Regional Studies: Contemporary Native Peoples of Canada (S/A)** (see Sociology/Anthropology Interdepartmental Studies Program)

**3241 Regional Studies: The Atlantic (S/A)** (see Sociology/Anthropology Interdepartmental Studies Program)

**3242 European Societies (S/A)** (see Sociology/Anthropology Interdepartmental Studies Program)

**3249 Peoples of the Pacific (S/A)** (see Sociology/Anthropology Interdepartmental Studies Program)

**3254-3257 Regional Studies (S/A)** (see Sociology/Anthropology Interdepartmental Studies Program)

**3260 Social and Economic Development (S/A)** (see Sociology/Anthropology Interdepartmental Studies Program)

**3290 Deviance** examines major sociological theories and methodological techniques central to the study of deviance and crime are outlined and evaluated. The distribution, attributes and explanations of a variety of forms of deviance are examined, which may include violence, sexual deviance, delinquency, addiction, mental disorder, theft, organized crime, political deviance and corporate deviance.

**3300-3313 Sociological Specialties** will have a topic of current interest and importance, announced by the department for each term, such as racial and ethnic relations, sociology of religion, art, politics, language, conflict, stratification, knowledge, selected social problems.

**3314 Gender and Society (S/A)** (see Sociology/Anthropology Interdepartmental Studies Program)

**3317 Oil and Society (S/A)** (see Sociology/Anthropology Interdepartmental Studies Program)

**3318 Culture and Aging (S/A)** (see Sociology/Anthropology Interdepartmental Studies Program)

**3320 Terrorism and Society (S/A)** (see Sociology/Anthropology Interdepartmental Studies Program)

**3330-3339 Interdisciplinary Specialties (S/A)** (see Sociology/Anthropology Interdepartmental Studies Program)

**3395 Criminal Justice and Corrections** provides an introduction to the operation of the Canadian criminal justice system. Topics to be examined may include the origin, nature and utilization of criminal law, policing, adult and juvenile courts, sentencing, correctional institutions, and community based corrections (probation, parole, community service). Criminal justice policy formulation and application are also discussed. Prerequisite: Sociology 3290.

**3410 Sociology of Sport** (same as Human Kinetics and Recreation 3410) is an examination of the relationship between sport and society. Areas could include social origin of sport, social history of sport, religion and sport, sport and socialization, sport and social stratification, gender and sport, violence in sport, sport and nationalism.

**3600 The Use of Theory in Sociology and Anthropology (S/A)** (see Sociology/Anthropology Interdepartmental Studies Program)

**3610 Society and the Life Cycle (S/A)** (see Sociology/Anthropology Interdepartmental Studies Program)

**3630 New Media Methods in Social Research (S/A)** (see Sociology/Anthropology Interdepartmental Studies Program)

**3700 Social and Cultural Change (S/A)** (see Sociology/Anthropology Interdepartmental Studies Program)

**3710 Post-Soviet Transformations** will explore problems of development in post-Soviet countries, examining them in a broader context of modernization. 'Catch-up' modernization gives rise to a set of problems related to institutional importation, e.g., a gap between formal and informal institutions. These problems exist in Russia as well as in a number of other less-developed countries.

Prerequisites/Co-requisites: Students would have to complete 6 credit hours in Sociology at the 2000-level in order to enrol in this course.

**3720 Ethnicity and Nationalism in Contemporary Societies** - inactive course.

**3731 Sociology of Culture** is a comparative examination of major contemporary sociological texts on the relationship between culture, broadly understood as symbolic systems, and social structure

**4000 Society and Culture (S/A)** (see Sociology/Anthropology Interdepartmental Studies Program)

**4040 Advanced Methods of Social Research** is conceptualization and empirical research. Selection of appropriate indicators. Multidimensional classification. Multivariate analysis. Special aspects of multivariate analysis. Panel analysis. Group analysis. The structure of arguments. Clarification of concepts. Prerequisite: Sociology 3040 or equivalent.

**4070 Aboriginal Self-Governance (S/A)** (see Sociology/Anthropology Interdepartmental Studies Program)

**4071 Social and Cultural Aspects of Health and Illness (S/A)** (see Sociology/Anthropology Interdepartmental Studies Program)

**4072 Social and Cultural Aspects of Death (S/A)** (see Sociology/Anthropology Interdepartmental Studies Program)

**4073 Studies in Underclass Life (S/A)** (see Sociology/Anthropology Interdepartmental Studies Program)

**4074 Ritual and Ceremony (S/A)** (see Sociology/Anthropology Interdepartmental Studies Program)

**4089 Language and Social Change (S/A)** (see Sociology/Anthropology Interdepartmental Studies Program)

**4091 Oil and Development (S/A)** (see Sociology/Anthropology Interdepartmental Studies Program)

**4092 Gender and Social Theory (S/A)** (see Sociology/Anthropology Interdepartmental Studies Program)

**4093-4099 (Excluding 4096) Special Areas in Sociology** will have the content announced when offered

**4100-4109 (Excluding 4107) Special Topics in Institutional Analysis** is advanced analysis from a sociological perspective of issues pertaining to specific social institutions.

**4107 Women and Technological Change** - inactive course.

**4110 Culture and Personality (S/A)** (see Sociology/Anthropology Interdepartmental Studies Program)

**4120 Sociology of Art** - inactive course.

**4130 Social Stratification** examines causes, nature, and consequences of systems of class, status, and power, prestige, esteem, ranking.  
Prerequisite: Sociology 2100.

**4140-4149 Advanced Interdisciplinary Specialities (S/A)** (see Sociology/Anthropology Interdepartmental Studies Program)

**4150 Advanced Social Theory** is an intensive examination of sociological theories  
Prerequisites: Sociology 3150 or equivalent.

**4160 Theory Construction and Explanation in Sociology** is consideration of the nature of explanation in sociology, causality, model building, theory

construction.  
Prerequisites: Sociology 3150 or equivalent.

**4170 Sociology of Knowledge** is a seminar course which focuses upon some of the most distinctive approaches to the study of the relationship between knowledge and social structure.  
Prerequisites: Sociology 3150 or permission of the instructor.

**4200-4220 (Excluding 4204) Special Topics in Sociology**

**4230 Women and Development** is a senior level seminar course focusing on the processes of development, especially international development, as they affect women and relations between men and women.  
Note: *Credit will not be given for both Sociology 4230 and the former Sociology 4204.*

**4240 Development Issues and Policies in Newfoundland and Labrador** is a senior-level seminar course that focuses on the interaction between sociological research and theory on the one hand and government policy-making and implementation on the other with respect to social and economic development in Newfoundland and Labrador.

**4600 Social Psychology (Advanced Seminar)** is a further consideration of topics considered in Sociology 3120, with emphasis on contemporary research.  
Prerequisite: Sociology 3120.

**4995 Honours Essay**

**4996 Comprehensive Examination** - inactive course.

## 6.27 Sociology/Anthropology Interdepartmental Studies Program

Program Supervisor: R. Clark, Department of Anthropology

### 6.27.1 General

The Sociology/Anthropology Interdepartmental Program is for students whose Major interests lie in areas which overlap departmental boundaries. It was originally (1973-80) a program option within both the Anthropology and Sociology Departments. The purpose of the program is to provide for a systematic study of human society through accessible works of Sociology and Anthropology which are not narrowly limited to one discipline. Courses are topical, regional or integrative in character, and a balanced plan of study will include some of each type, with the integrative courses scheduled to follow and draw together lessons of the others. The program has both Major and Minor components, the details of which are given below. In constructing their individual study plans, students should consult the Program Supervisor wherever questions arise as to the optimum sequence or suitability of particular courses. S/A program courses are also part of the Sociology and Anthropology department listings, and may be taken by students in these and other departments, providing they have the appropriate prerequisites or permission of the instructor.

### 6.27.2 Prerequisites

S/A courses at the 2000 level have no prerequisites. For courses at the 3000 or 4000 level students must have taken 6 credit hours in S/A courses at the 2000 level. For prerequisites for all Sociology and Anthropology courses other than S/A courses see the Sociology or Anthropology departmental regulations. In addition, some courses may have other specific prerequisites, as noted in this calendar, or as set out in the course description. These may, however, be waived at the discretion of the Program Supervisor or delegate for students who can demonstrate they have equivalent or alternate preparation for the course. If there is any question about this students should, in the first instance, consult the instructor.

### 6.27.3 S/A Major Program

A major in the S/A program must complete at least 36 credit hours, consisting of 24 credit hours in S/A courses, plus a minimum of 12 additional credit hours (see below).

The 24 credit hours in S/A must include the following:

1. Nine credit hours in introductory courses, including:
  - a. At least 6 credit hours in S/A courses at the 2000 level;
  - b. Three credit hours in courses chosen from Sociology 1000, Sociology 2000, Sociology 2250, Anthropology 1031, or an additional 2000 level S/A course.

Note: *Ideally, the 9 credit hours in courses at the introductory level should be taken before work on the 3000 level is begun; however, one introductory course may be taken concurrent to work at the 3000 level.*

2. S/A 3600, followed by S/A 4000.
3. An additional 3 credit hours from S/A courses at the 4000 level.
4. Six additional credit hours in S/A courses at the 3000 or 4000 level, to complete the 24 S/A credit hours requirement.

The 12 additional credit hours shall be completed from any Sociology, Anthropology or S/A courses, in any combination, at least 6 credit hours of which must be taken in courses at the 3000 or 4000 levels.

### 6.27.4 S/A Minor Program

A Minor in Sociology/Anthropology requires completion of 24 credit hours in S/A courses, as follows:

1. at least 9 credit hours in courses at the 2000 level
2. at least 15 credit hours in courses at the 3000 and 4000 level, including S/A 3600 and S/A 4000.

Students will normally complete at least 6 credit hours in courses at the 2000-level before proceeding to the 3000 and 4000 levels.

## 6.27.5 Honours Program

To be accepted into the Honours Program, a student must submit an "Application for Admission to Honours Program" form to the S/A Program Supervisor. A successful applicant will not only meet the criteria laid out in the Regulations for the Honours Degree of Bachelor of Arts, but also have a proposal accepted for an honours essay research topic, for which the student has identified a faculty member who has indicated willingness to act as supervisor.

Honours students are required to complete at least 60 credit hours of S/A, Anthropology and Sociology courses, including all courses required for the Major in Sociology/Anthropology, of which at least 39 credit hours must be in S/A courses. The courses must include either S/A 4990 or 4991 and must meet the requirements outlined in the Regulations for the Honours Degree of Bachelor of Arts.

## 6.27.6 Course List

In accordance with Senate's *Policy Regarding Inactive Courses*, the course descriptions for courses which have not been offered in the previous three academic years and which are not scheduled to be offered in the current academic year have been removed from the following listing. For information about any of these inactive courses, please contact the Head of the Department.

**2200 Communities (S/A)** is an interdisciplinary examination of the concept of Community. Readings will include community studies from North America and Europe.

**2210 Communication and Culture (S/A)** is an examination of verbal and non-verbal systems of communication, and the influence of language on human cognition.

**2220 Labrador Society and Culture (S/A)** examines the Sociology and Anthropology of Labrador. The focus is on social and cultural aspects of contemporary Labrador.

**2230 Newfoundland Society and Culture (S/A)** (same as Folklore 2230) examines the Sociology and Anthropology of the Island of Newfoundland. The focus is on social and cultural aspects of contemporary island Newfoundland.

**2240 Canadian Society and Culture (S/A)** is a descriptive and analytic approach to the development of Canadian society and culture.

**2260 War and Aggression (S/A)** is a critical review of ethological, psychological and sociological approaches to the understanding of violence and organized aggression.

**2270 Families (S/A)** is a comparative and historical perspective on the family as a social institution, the range of variation in its structure and the determinants of its development.

**2280 The City (S/A)** examines varieties of urban life around the world and through history. The city as habitat and as spectacle.

**2350 Religious Institutions (S/A)** (same as Religious Studies 2350) is a comparative study of religious institutions and beliefs, calendrical feasts and solemnities, religious roles and hierarchies, ritual innovation and revitalization.

**3100 Dominance and Power (S/A)** is a study of dominance behaviour in human societies, surveying the range from private to public and from openly exploitative to fully legitimate power systems.

**3140 Social Movements (S/A)** is an examination of social movements which challenge prevailing social institutions and cultural values. Social movements considered may include religious cults and sects, millenarian movements, attempts at utopian and communal living, feminism, labour and revolutionary movements.

**3210 Persistence and Change in Rural Society (S/A)** assesses the social and cultural significance of the rural experience in the face of expanding urbanism. Topics may include (a) the nature of rural society in Canada, (b) similarities between Canadian and European rural society, (c) utopian and anarchist movements in rural life, and (d) reaction of agricultural populations to external influence.

**3220 Work and Society (S/A)** - inactive course.

**3240 Regional Studies: Contemporary Native Peoples of Canada (S/A)** is a survey of current social conditions faced by Native communities in Canada and the critical issues posed for governments and society in general.

**3241 Regional Studies: The Atlantic (S/A)** are selected topics in the ecological, cultural, economic, social and political characteristics of the North Atlantic Region.

Note: *Credit may not be obtained for both S/A 3241 and the former S/A 4240.*

**3242 European Societies (S/A)** - inactive course.

**3249 Peoples of the Pacific (S/A)** - inactive course.

**3254-3257 Regional Studies (S/A)** are interdisciplinary approaches to the study of selected regions.

**3260 Social and Economic Development (S/A)** is an examination of theories of development including a critical analysis of empirical situations to which they are applied.

**3314 Gender and Society (S/A)** is an examination of biological, psychological, social and cultural aspects of gender, with an emphasis upon contemporary directions of change in sex roles.

**3317 Oil and Society (S/A)** - inactive course.

**3318 Culture and Aging (S/A)** is an introduction to the study of aging from a social and cultural perspective. Distinctions between the biological and social elements of the aging process will be examined. The overview of social and cultural gerontology includes social, economic and political influences on later life, as well as the culture-based needs and aspirations of the aged.

**3320 Terrorism and Society (S/A)** - inactive course.

**3330 Interdisciplinary Specialities (S/A)** - inactive course.

**3331-3339 Interdisciplinary Specialities (S/A)** are interdisciplinary approaches to topics of special interest in Sociology and Anthropology.

**3600 The Use of Theory in Sociology and Anthropology (S/A)** is an examination of the nature of explanation in Sociology and Anthropology. Discusses relationships among the major integrating theories in Sociology and Anthropology and considers how empirical data can be treated from several different theoretical viewpoints. Required for S/A Majors and Minors. Open to others by permission of the instructor.

**3610 Society and the Life Cycle (S/A)** - inactive course.

**3630 New Media Methods in Social Research (S/A)** - inactive course.

**3700 Social and Cultural Change (S/A)** - inactive course.

**4000 Society and Culture (S/A)** is a seminar course designed for S/A Majors. Focuses on some of the fundamental questions of social order and social life in their philosophical and ethical dimensions, with particular reference to the history of ideas. Required course for S/A Majors and Minors. Open to others by permission of the instructor. Prerequisite: S/A 3600.

**4070 Aboriginal Self-Governance (S/A)** is an advanced course on contemporary issues on the development of, and barriers to, self-government among Canadian aboriginal peoples. The focus will be on topics such as land claims and claims settlements, self-government agreements and proposed agreements, economic development, environmental and social impact of industrial developments, and cultural and religious revival. Prerequisite: S/A 3240.

**4071 Social and Cultural Aspects of Health and Illness (S/A)** - inactive course.

**4072 Social and Cultural Aspects of Death (S/A)** covers topics which may include: symbolic meanings and values attached to death; cultural and historical variations in the management of death, e.g. treatment of the 'terminally ill', burial rites, the mourning process, and the social fate of survivors, together with the social and psychological meanings of these behaviours. Open to those without normal prerequisites by permission of the instructor.

**4073 Studies in Underclass Life (S/A)** is a critical inquiry into the social sources of human misery and suffering that characterize life in the underclass.

**4074 Ritual and Ceremony (S/A)** - inactive course.

**4077 Advanced Studies in Terror and Society (S/A)** - inactive course.

**4089 Language and Social Change (S/A)** - inactive course.

**4091 Oil and Development (S/A)** - inactive course.

**4092 Gender and Social Theory (S/A)** is a seminar which will develop the material covered in S/A 3314 at a more theoretical level. It will cover the history of social thought as it applies to issues of gender, and will discuss some theoretical debates in the area of gender and social theory. Prerequisite: S/A 3314 or permission of the instructor.

**4110 Culture and Personality (S/A)** - inactive course.

**4140-4149 Advanced Interdisciplinary Specialities (S/A)** is an advanced interdisciplinary approaches to various topics of importance in the Social Sciences. By permission of the instructor.

**4990 Sociology/Anthropology Honours Essay (S/A)**

**4991 Sociology/Anthropology Comprehensive Examination (S/A)**

## 6.28 Women's Studies

Program Coordinator: J. Guthrie, Department of English

The Minor in Women's Studies is a multi-disciplinary program offered to candidates for the degrees of Bachelor of Arts, Bachelor of Science, Bachelor of Commerce (Co-operative), Bachelor of Business Administration, and the physical education and recreation degrees offered by the School of Human Kinetics and Recreation. The Minor program is an alternative to a Minor offered by a single department and satisfies the degree requirement for a Minor.

The objective of the program is to explore the experience and contributions of women from the perspective of different academic disciplines and to compare the situation of women in society with that of men. Assumptions about women and gender differences and the social implications of these assumptions will be explored. While consideration will be given to socially relevant issues, attention will also be paid to the implications for academic disciplines of the research on women and their contribution to society.

### 6.28.1 Regulations

Students who minor in Women's Studies shall complete a minimum of 24 credit hours in courses which shall include the following:

1. Women's Studies 2000, Women's Studies 3000, and Women's Studies 4000
2. A minimum of 15 credit hours in courses from the Elective Course List outlined below, taken in at least three different subject areas. One of these courses may be a selected topics or directed readings course in any Arts subject relevant to the minor program.
3. A selected topics course or directed readings course included in a student's minor program must be approved in advance by the Committee on Undergraduate Studies on the recommendation of the Program Coordinator.
4. Not more than 3 credit hours in courses in the student's Major Program may also be used to satisfy the requirements of the minor in Women's Studies.

### 6.28.2 Course List

#### Core Courses

Women's Studies 2000  
Women's Studies 3000  
Women's Studies 4000

#### Elective Courses

Anthropology 3305  
Anthropology 4081  
Education 3565\*\*  
English 2700  
English 3817  
English 3830  
Folklore 3950  
German 4802\*  
History 3760  
History 3770  
History 3780  
History 3813  
History 3821\*  
History 4006\*  
Law and Society 3200  
Linguistics 3212  
Human Kinetics and Recreation (HKR) 3490  
Human Kinetics and Recreation (HKR) 3595  
Philosophy 2805  
Political Science 3140\*  
Political Science 3340\*  
Psychology 2540  
Psychology 3533  
Religious Studies 2800  
Religious Studies 2801  
Social Work 5522  
Sociology 4210  
Sociology 4230  
Sociology/Anthropology 3314  
Sociology/Anthropology 4092  
Women's Studies 2001\*  
Women's Studies 3001/Medieval Studies 3006/English 3006\*  
Women's Studies 3002-3020 (excluding 3004, 3009)  
Women's Studies/Russian Studies 3004  
Women's Studies 3100  
Women's Studies/Sociology 4107\*

Notes: 1. Normal prerequisites and waiver policies in the respective departments will apply.

2. \*\*Education 3565 may be applied to the Bachelor of Arts or Bachelor of Science degree only in the case of students who

complete the Women's Studies Minor Program.

3. Courses marked with \* are not offered on a regular basis. Consult the appropriate department for scheduling information.

In accordance with Senate's *Policy Regarding Inactive Courses*, the course descriptions for courses which have not been offered in the previous three academic years and which are not scheduled to be offered in the current academic year have been removed from the following listing. For information about any of these inactive courses, please contact the Head of the Department.

**2000 An Interdisciplinary Introduction to Women's Studies** is an interdisciplinary introduction to the major concepts, issues and debates of Women's Studies.

**2001 Women and Science** - inactive course.

**3000 Feminist Research Methods** is an introduction to feminist methodologies and approaches to the formal construction of knowledge, framing of research questions, and gathering of data. The course provides an interdisciplinary survey of major research methods used by feminist scholars.

**3001 Women Writers in the Middle Ages** (same as Medieval Studies 3006 and English 3006\*) will study selections from the considerable corpus of women's writings in the Medieval period, as well as issues which affected women's writing. All selections will be read in English translation.

Note: Credit may not be obtained for more than one of Women's Studies 3001, Medieval Studies 3006, and the former Medieval Studies 3351.

**3002-3020 (Excluding 3004 and 3009) Special Topics in Women's Studies**

**3100 Women and Health** uses an interdisciplinary perspective and will explore selected issues relating to women and their health. The material covered will help students acquire a better appreciation and understanding of some of the determinants of women's health, gender bias in health care and research, the portrayal of women's health in the popular press, and women as patients. A primary emphasis of the course will be to teach students the skills to carry out gender-based analyses of the health literature and health organizations.

Prerequisite/Co-requisite: Women's Studies 2000.

**4000 Seminar in Women's Studies** is an interdisciplinary seminar designed to focus on women's issues, and on theories and methodologies of women's studies.

Three hour seminar per week.

Prerequisites: Students must normally have completed Women's Studies 2000 and 15 credit hours in other Women's Studies Program courses before taking Women's Studies 4000. In exceptional cases, students without these prerequisites may be accepted into the course, with the approval of the instructor of Women's Studies 4000 and the Program Coordinator.

**4107 Women and Technological Change** - inactive course.

Archived Previous Calendar  
Current University Calendar available at  
[mun.ca/university-calendar](http://mun.ca/university-calendar)

SCHOOL OF MUSIC

# SCHOOL OF MUSIC

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**Director**

Gordon, T., B.A., B.Mus., M.A. *Central Missouri State*, Ph.D.  
*Toronto*; Professor

**Associate Director**

Cheramy, M., B.Mus. *British Columbia*, M.M. *Indiana*, D.M.A. *Rice*;  
Associate Professor

**Manager of Finance and Administration**

Ball, D.L., B.Sc., B.A., M.B.A. *Memorial*

**Professors**

Buell, D., B.E. *Wisconsin State*, M.Mus., Ph.D. *Wisconsin*; Winner  
of the President's Award for Distinguished Teaching, 1993-1994  
(on leave)

Diamond, B., B.Mus.(Honours), M.A., Ph.D. *Toronto*; Canada  
Research Chair in Traditional Music and Ethnomusicology; Joint  
appointment with Department of Folklore

Dunsmore, D.A., B.Mus.Ed. *Saskatchewan*, M.Mus. *Regina*, Ph.D.  
*Wisconsin*

Volk, M., B.Mus. *Regina*, M.Mus. *Juilliard*, D.M. *Indiana* (on leave)

**Associate Professors**

Adams, C.K., B.M.E. *Evangel College*, M.Mus. *Northwestern*, Dip.  
Fine Arts *Calgary*; Cross appointment with Faculty of Education

Bendza, P., B.Mus. *Michigan*, M.Mus. *Ohio*

Dahn, N., B.Mus. *New England*, M.Mus., D.M.A. *Cleveland*;  
Winner of the President's Award for Outstanding Research,  
2003-2004

Hestekin, K., B.Mus. *Kansas*, M.Mus. *Wisconsin*, Dipl.F.A.

*Calgary*; Winner of the President's Award for Distinguished  
Teaching, 2004-2005

Rice, P.F., B.Mus. *McMaster*, M.A., Ph.D. *Victoria*, A.R.C.T. (on  
leave)

Ross, C., B.A., Mus.M., Mus.Doc. *Toronto*, A.R.C.T.; Winner of the  
President's Award for Outstanding Research, 1999-2000

Schiller, C., B.Mus. *Mount Allison*, M.M. *New England  
Conservatory*, D.M.A. *Florida State*

Steeves, T., B.Mus. *Western Ontario*, Diplom-Musiker *Hannover,  
Germany*, Pruefung der Kuenstlerischen Reife, Solistenexamen  
*Freiburg, Germany*; Winner of the President's Award for  
Outstanding Research, 2003-2004

Szego, K., B.Mus. *Queen's*, M.A. *Hawaii*, Ph.D. *Washington*

Szutor, K., B.Mus. *British Columbia*, M.Mus. *Juilliard*, D.M.A.  
*British Columbia*; Winner of the President's Award for  
Outstanding Research, 2001-2002

**Assistant Professors**

Gosine, J., M.A. *St. Andrews*, M.Phil., Ph.D. *Cambridge*, A.R.C.M.

Leibel, J., B.Mus. *Regina*, M.Mus. *North Texas*, D.M.A. *Michigan*

Power, R., B.Mus. *Memorial*, M.Mus. *McGill*

Regehr, V., Performance Dipl. *RCM Toronto*, M.M., D.M.A. *SUNY*

**Adjunct Professors**

David, M., B.Mus.(Honours) *McGill*, D.M.A. *Montréal*

Gardner, P., D.Litt. *Memorial*

Wyre, J., B.Mus., B.Mus.Ed. *Eastman*

## 1 Programs

The School of Music offers the following programs:

1. Four-year Bachelor of Music with majors in:
  - a. Performance
  - b. Theory and Composition
  - c. Music History and Literature
  - d. General Musical Studies (with optional minor from a discipline other than music)
  - e. Joint Major in Music Performance and History and Literature of Music
  - f. Joint Major in Music Performance and Music Theory and Composition
2. Five-year Conjoint Bachelor of Music/Bachelor of Music Education
3. Minor in Music History
4. Interdisciplinary Minor in Music and Culture
5. Interdisciplinary Major in Drama and Music (Bachelor of Arts)

## 2 Registration in Music Courses (Non-Music Students)

The following music courses are available to students who have not been admitted to a program in the School of Music, and are appropriate for students with little or no musical background:

Music 1116  
Music 1120  
Music 2011  
Music 2012  
Music 2013

The following large ensemble courses are available to non-music majors with appropriate background, subject to the approval of the instructor:

Music 2611 (1 cr. hr. per semester)  
Music 2612 (1 cr. hr. per semester)  
Music 2613 (1 cr. hr. per semester)  
Music 2614 (1 cr. hr. per semester)  
Music 2615 (1 cr. hr. per semester)  
Music 2616 (1 cr. hr. per semester)

In addition, most courses in music history and music theory (course numbers with second digit "0" or "1") are available to non-music majors who have fulfilled the prerequisites.

## 3 Health Statement

Music study and music making are activities that demand great mental and physical energy and coordination. For this reason, students are strongly encouraged to maintain a healthy lifestyle, getting adequate rest, proper nutrition, and exercise, and avoiding practices which could be detrimental to good health and well-being.

## 4 Bachelor of Music Degree: Admission and Academic Standards

1. Applicants wishing to enter the Bachelor of Music degree must apply on-line at [www.mun.ca/regoff/](http://www.mun.ca/regoff/) or complete the School of Music application form in addition to the "Undergraduate Application for Admission/Readmission" to the University form. Both forms are available from the Office of the Registrar or the School of Music.
2. Admission to the Bachelor of Music degree is normally possible in the Fall semester only. The application deadline for admission to

the Fall semester is January 31.

3. Notwithstanding the above:
  - a. students who have withdrawn from the music degree program may apply to be readmitted in either the Fall or Winter semester.
  - b. students transferring from post-secondary music programs at other institutions may be considered for admission in the Winter semester if they have the prerequisites to enter a sufficient number of music courses in that semester.
  - c. the application deadline for admission to the Winter semester is September 30.
4. All candidates must satisfy the general admission requirements of the University and must satisfy additional requirements of the School of Music as set out below and specified on the School of Music's website: [www.mun.ca/music](http://www.mun.ca/music):
  - a. **Placement Test in Theory and Musicianship:** This test in basic rudiments, aural perception, and simple four-part harmony will be given during the entrance audition period.
  - b. **Audition:** All applicants are required to audition to the satisfaction of the School on the instrument that they have chosen as their principal applied study in their degree program (i.e. voice, piano, organ, guitar, or any orchestral instrument.) Auditions are held in the Winter semester. Late auditions will be accepted if space is available. Students auditioning late are normally not eligible for School of Music entrance scholarships.  
 Transfer students and students seeking readmission to the music degree program must audition to determine their placement in applied study courses. The level of audition should be equivalent to the jury requirements for the prerequisite of the course to which they are seeking admission. Jury requirements are available from the office of the School of Music.
  - c. **Piano Proficiency Test:** Applicants whose principal applied study is other than keyboard are also required to demonstrate a reasonable technical facility at the piano. Applicants whose level of attainment is not acceptable to the School will be required to repeat and pass the Piano Proficiency Test prior to registering for Music 1127. Students are advised to contact the School of Music regarding scheduling of the test and for information about private remedial piano instruction.
5. Students admitted to the Bachelor of Music program will be permitted to register for a maximum of 17 credit hours per semester, without requiring written permission of the Director.
6. With the exception of those who have completed Music 440B or 445B, students who are not registered for a principal applied study course or Education 403X at the end of the regular registration period will be deemed to have withdrawn from the music degree program.
7. A student who withdraws from a principal applied study course at any time in the semester shall have his/her eligibility to continue in the degree program reviewed by the Committee on Undergraduate Studies. The Committee shall determine whether or not the student shall be deemed to have withdrawn.
8. A student whose average in music courses falls below 65% in any semester will be placed on probation.
9. A student will be required to withdraw from the music degree program if a) the student's average in music courses falls below 65% in each of two consecutive semesters of registration in the program, or b) the student's average in music courses falls below 65% in any three semesters of registration in the program, or c) the student fails any music course more than once, or d) the student has been unable to complete two consecutive semesters or three non-consecutive semesters of applied music studies (Music 140A/B, 240A/B, 340A/B, 440A/B, 345A/B, 445A/B).
10. Students who have withdrawn from the music degree program and wish to re-enter the program must re-apply in competition. A student re-entering the Bachelor of Music degree program may be readmitted on probation if the Admissions Committee so recommends.
11. Students who have been required to withdraw from the music degree program may apply for readmission after a minimum of TWO semesters have elapsed following the withdrawal.
12. Students who have been required to withdraw from the music degree program twice are ineligible for further readmission.
13. Students in the performance major must attain a minimum grade of 75% in each of the jury exam and the course work for Music 345A/B and Music 445A/B. Students who fail to do so will be required to withdraw from the performance major. In such cases, the student may apply in writing to the Director for admission into a major other than performance.
14. A student may not register for and repeat a principal applied study course that s/he has already successfully completed, unless the student has the written permission of the Director.
15. Students wishing to appeal matters pertaining to admission, re-admission and academic standing must make the appeal in writing to the Chair, Committee on Undergraduate Studies of the School of Music.
16. In special cases, the Committee on Undergraduate Studies may waive the admission, readmission, and course requirements that apply only to the School of Music, subject to ratification by the Academic Council. Such waivers shall not reduce the total number of music courses required for the degree.
17. The active participation in School of Music ensembles is an integral part of a music student's education. One must be present at rehearsals and performances to have participated in the learning experience. Furthermore, the success of the ensemble as a whole is dependent upon the regular attendance and participation of all members in the ensemble. Accordingly, attendance will be required in School of Music ensembles with the following course numbers: Music 2611, 2612, 2613, 2614, 2615, 2616 and 3514.

## 5 Bachelor of Music Degree Regulations

### 5.1 Major

Candidates normally do not declare their intended major area of study before their fourth semester in the Bachelor of Music program. Candidates shall choose one of the following areas for their major:

1. **Performance.** This program is recommended for those candidates planning to pursue a career as a solo performer, orchestral or band player, or private teacher. Candidates for this major must apply in writing to the Director by the last day of classes in the semester during which they are registered for Music 240B. Candidates will normally be required to audition for this program. Where possible, the jury examination for Music 240B will be considered as the audition for admission to the Performance major, although in some cases the audition may require repertoire beyond the level and amount prepared for the jury examination. Admission to this major will be based on a candidate's: i) performance on the audition and achievement in Music 140A/B and 240A/B, ii) general academic achievement, and iii) potential for a career and/or graduate work in performance.
2. **Theory and Composition.** This program is recommended for those candidates who plan to compose, to carry out research in music theory, or to teach theoretical subjects. Candidates for this major must apply in writing to the Director by the last day of classes in the semester during which they are registered for Music 2108. Admission to this major will be based on a candidate's: i) achievement in Music 1107, 1108, 2107, and 2108, ii) general academic achievement, and iii) potential for a career and/or graduate work in music

theory or composition.

3. **History and Literature.** This program is recommended for those candidates interested in research in music and/or music journalism. Candidates for this major must apply in writing to the Director by the last day of classes in the semester during which they are registered for Music 2003. Admission to this major will be based on a candidate's: i) achievement in Music 1002, 1003, 2002, and 2003, ii) general academic achievement, and iii) potential for a career and/or graduate work in music history and literature, journalism, or a related field.
4. **General Musical Studies.** This program is recommended for those candidates who wish a broad knowledge of music that would prepare them for a variety of career and advanced study options. Students have the option of including a minor in a discipline other than music, in which case they must meet all prerequisites and requirements for the minor. The subject of the candidate's minor shall be that declared by the candidate on the Change of Academic Program Form which must then be signed by the head of the department of the minor. Students who intend to apply for admission to the Bachelor of Music Education as a second degree program should consult with the Director and with the Faculty of Education regarding course selection. Candidates for the General Musical Studies major need not submit an application. All candidates who have not been admitted to another major by the end of their fourth semester in the Bachelor of Music program will automatically be admitted to the General Musical Studies major.
5. **Joint Major in Music Performance and History and Literature of Music.** This program is recommended to those candidates who have both advanced performance skills and an interest in musicology and research. Students who are planning careers in specialized performance, music editing or as university-based musicians are encouraged to consider this major. Candidates must fulfill the requirements for admission to both the Performance and Music History and Literature majors.
6. **Joint Major in Music Performance and Theory and Composition.** This program is recommended to those candidates who have both advanced performance skills and an interest in music theory and composition. Students who are planning careers in performance, music editing, conducting, arranging, composing or as university-based musicians are encouraged to consider this major. Candidates must fulfill the requirements for admission to both the Performance and Theory and Composition majors.
7. **Bachelor of Music/Bachelor of Music Education Conjoint Degrees.** This program is offered with the Faculty of Education, and is recommended for candidates planning to pursue a career in music education. Candidates for the Conjoint Degrees program must meet the Faculty of Education's admission requirements for the Bachelor of Music Education Conjoint Degree program. Applications must be submitted to the Faculty of Education by January 15 for admission in the following Fall Semester.

A candidate may not change his/her major without the written permission of the Director of the School. In cases where permission is granted, the candidate shall be required to fulfill all requirements for the new major. However, in the case where a student's major changes from Performance to one of the other majors, the principal applied study courses successfully completed under the Performance major may be used to satisfy the requirements for principal applied study in the new major, with any additional credit hours being used as music electives in the new major.

## 5.2 Core Program

All Bachelor of Music students, regardless of major, must complete the following courses (44 credit hours):

1. **Applied Music (10 cr. hrs.):** 140A/B, 240A/B, 2 credit hours of 2611.
2. **Music History (12 cr. hrs.):** 1002, 1003, 2002, 2003.
3. **Music Theory (22 cr. hrs.):**
  - a. **Written Theory:** 1107, 1108, 2107, 2108, 3107.
  - b. **Aural Skills:** 1117, 1118, 2117, 2118, 3117.
  - c. **Keyboard Harmony:** 1127 or 1137, 1128 or 1138, 2127 or 2137, 2128 or 2138.

The remainder of the credits required for the degree are determined according to the student's major, as below.

## 5.3 Performance Major

To be awarded the degree of Bachelor of Music in Performance, a candidate shall comply with the School's regulations, and successfully complete a minimum of 124 credit hours, including the 44 credit hours in the Core Program. The remaining 80 credit hours shall be chosen as follows:

1. Music 345A/B, 445A/B.
2. Eight credit hours of large ensemble (Music 2611, 2612, 2613, 2614, 2615, 2616). With the permission of the Director, students whose principal applied study is keyboard, guitar or voice may substitute a maximum of 2 credit hours chosen from Music 3221 to 3282 and/or Music 3510 to 3516 for 2 credit hours of large ensemble.
 

*Note: Placement in ensembles may require an audition, and is subject to approval by the Director. Students will normally be placed in the ensemble(s) most closely related to their principal applied study.*
3. Three credit hours chosen from music theory courses beyond the 2000 level.
4. Six credit hours chosen from Music 3510 to 3516. With the permission of the Director, students whose principal applied study is voice may substitute a maximum of 4 credit hours from Music 2616 and/or a maximum of 4 credit hours from Music 3762-3763.
5. Twenty-seven additional credit hours chosen from music courses beyond the 1000 level and meeting the following requirements:
  - a. At least 12 credit hours must be chosen from courses beyond the 2000 level in music history and music theory.
  - b. Students whose principal applied study is voice must include Music 2700 and 2701.
  - c. Credit will not be given for more than 14 credit hours of large ensemble (Music 2611-2616) toward the Bachelor of Music degree.
  - d. Credit toward the degree will not be given for more than 15 credit hours in Music 3510-3516 beyond the credits permitted in 2. above.
  - e. Credit toward the degree will not be given for more than 8 credit hours from Music 241A/B, 346A/B, and 446A/B.
  - f. Students in the Performance major may substitute a maximum of three of the following courses for music electives: Education 2510, 2520, 2530, 3920, 3925, 4835, 4845.

*Note: Please note that Music Education majors have priority in registering for these courses; spaces may not be available for Performance majors.*

6. Twenty-four credit hours chosen from disciplines other than music and music education, including at least 6 credit hours from courses in English and/or designated research/writing courses. Students whose principal applied study is voice must include at least 3 credit hours in each of Italian, German and French.

## 5.4 General Musical Studies Major

To be awarded the degree of Bachelor of Music in General Musical Studies, a candidate shall comply with the School's regulations and successfully complete a minimum of 123 credit hours, including the 44 credit hours in the Core Program. The remaining 79 credit hours shall be chosen as follows:

1. Music 340A/B, 440A/B.
2. Eight credit hours of large ensemble (Music 2611, 2612, 2613, 2614, 2615, 2616). With the permission of the Director, students whose principal applied study is keyboard, guitar or voice may substitute a maximum of 2 credit hours chosen from Music 3221 to 3282 and/or Music 3510 to 3516 for 2 credit hours of large ensemble.  
*Note: Placement in ensembles may require an audition, and is subject to approval by the Director. Students will normally be placed in the ensemble(s) most closely related to their principal applied study.*
3. Three credit hours chosen from music theory courses beyond the 2000 level.
4. Three credit hours chosen from Music 3510-3516, 3711, 3712, 3722, 3732, 3742, 3762, 3763, 3772, 3773.
5. An additional 57 credit hours to be chosen according to either Option A or Option B below:

### 5.4.1 Option A (With Minor)

1. An additional 18 credit hours chosen from music courses beyond the 1000 level and meeting the following requirements:
  - a. At least 9 credit hours must be chosen from courses beyond the 2000 level in music history and music theory.
  - b. Students whose principal applied study is voice must include Music 2700 and 2701.
  - c. Credit will not be given for more than 14 credit hours of large ensemble (Music 2611-2616) toward the Bachelor of Music degree.
  - d. Students in the General Musical Studies major may take a maximum of 8 credit hours in Music 3510-3516 beyond the credits permitted in 5.4., 2. above.
2. Six credit hours chosen from courses in English and/or designated research/writing courses.
3. A minor of at least 24 credit hours in a subject other than Music. The candidate must follow the regulations for the minor as set forth in the appropriate section of the Calendar.
4. Nine credit hours open electives. These may be chosen from courses in music, the minor subject, and/or any other disciplines.

### 5.4.2 Option B (No Minor)

1. An additional 33 credit hours chosen from music courses beyond the 1000 level and meeting the following requirements:
  - a. At least 12 credit hours must be chosen from courses beyond the 2000 level in music history and music theory.
  - b. Students whose principal applied study is voice must include Music 2700 and 2701.
  - c. Credit will not be given for more than 14 credit hours of large ensemble (Music 2611-2616) toward the Bachelor of Music degree.
  - d. Students in the General Musical Studies major may take a maximum of 8 credit hours in Music 3510-3516 beyond the credits permitted in 5.4., 2. above.
  - e. A maximum of three of the following courses may be substituted for music electives: Education 2510, 2520, 2530, 3920, 3925, 4835, 4845.  
*Note: Please note that Music Education majors have priority in registering for these courses; spaces may not be available for General Musical Studies majors.*
2. Twenty-four credit hours from disciplines other than music and music education, including at least 6 credit hours from courses in English and/or designated research/writing courses.

## 5.5 Conjoint Degrees Program: Bachelor of Music and Bachelor of Music Education

To be awarded the Conjoint Degrees of Bachelor of Music and Bachelor of Music Education, a candidate shall comply with the School's regulations and successfully complete a minimum of 159 credit hours, including the 44 credit hours in the Core Program. The remaining 115 credit hours shall be chosen as follows:

1. Music 340A/B, 440A/B.
2. Eight credit hours in large ensemble as follows:
  - a. Four credit hours from Music 2611, 2612, 2613, 2614.
  - b. An additional 4 credit hours from Music 2611, 2612, 2613, 2614, 2615, 2616. With the permission of the Director, students whose principal applied study is keyboard, guitar or voice may substitute a maximum of 2 extra credit hours in instrumental techniques (Music 3221 to 3282) for 2 of these credit hours.  
*Note: Placement in ensembles may require an audition, and is subject to approval by the Director. Students will normally be placed in the ensemble(s) most closely related to their principal applied study.*
3. One of Music 3104, 3109, or 3112.
4. Music 2311, 2312, 3311, 3312, 3313, 3314, 3315, 3316.
5. Eight credit hours chosen from: Music 3221, 3222, 3231, 3232, 3233, 3241, 3242, 3261, 3281, 3282.
6. Nine additional credit hours chosen from music courses beyond the 1000 level and meeting the following requirements:
  - a. Credit will not be given for more than 14 credit hours of large ensemble (Music 2611-2616) toward the Bachelor of Music/Bachelor of Music Education degrees.
  - b. Students whose principal applied study is voice must include Music 2700 and 2701.
  - c. Students in the Conjoint Degrees program may take a maximum of 8 credit hours in Music 3510-3516.
  - d. A maximum of two of the following courses in music education may be substituted for music electives in the Conjoint Degrees program: Education 4835, 4840, 4845, 4850, 4855, 4860.
7. Forty-five credit hours as prescribed by the Faculty of Education under Clause 2. of the Regulations for the Conjoint Degrees of Bachelor of Music and Bachelor of Music Education.
8. Twenty-four credit hours chosen from disciplines other than music and music education, including at least 6 credit hours from

courses in English and/or designated research/writing courses. Conjoint degrees students are strongly encouraged to take at least 18 credit hours in a second teachable subject.

## 5.6 Theory and Composition Major

To be awarded the degree of Bachelor of Music in Theory and Composition, a candidate shall comply with the School's regulations and successfully complete a minimum of 124 credit hours, including the 44 credit hours in the Core Program. The remaining 80 credit hours shall be chosen as follows:

1. Music 340A/B, 440A/B.
2. Eight credit hours from Music 2611, 2612, 2613, 2614, 2615, 2616. With the permission of the Director, students whose principal applied study is keyboard, guitar or voice may substitute a maximum of 2 credit hours chosen from Music 3221 to 3282 and/or Music 3510 to 3516 for 2 credit hours of ensemble.  
*Note: Placement in ensembles may require an audition, and is subject to approval by the Director. Students will normally be placed in the ensemble(s) most closely related to their principal applied study.*
3. Music 3100, 3104, 3105, 3112 and one of Music 3106 and 3108.
4. Music 2311, 3311, 3312, 3313, 3314.
5. Four credit hours chosen from: Music 3221, 3222, 3231, 3232, 3233, 3241, 3242, 3261, 3271, 3281, 3282.
6. Six credit hours chosen from courses beyond the 2000 level in music theory (in addition to those listed in 3. above).
7. Nine additional credit hours chosen from music courses beyond the 1000 level and meeting the following requirements:
  - a. Credit will not be given for more than 14 credit hours of large ensemble (Music 2611-2616) toward the Bachelor of Music degree.
  - b. Students in the Theory/Composition major may take a maximum of 8 credit hours in Music 3510-3516 beyond the credits permitted in 2. above.
  - c. Students whose principal applied study is voice must include Music 2700 and 2701.
8. Twenty-four credit hours chosen from disciplines other than music and music education, including at least 6 credit hours from courses in English and/or designated research/writing courses. All Theory and Composition majors are strongly encouraged to take at least 6 credit hours in German.

## 5.7 History and Literature of Music Major

To be awarded the degree of Bachelor of Music in History and Literature, a candidate shall comply with the School's regulations, and successfully complete a minimum of 123 credit hours, including the 44 credit hours in the Core Program. The remaining 79 credit hours shall be chosen as follows:

1. Music 340A/B, 440A/B.
2. Eight credit hours of large ensemble (Music 2611, 2612, 2613, 2614, 2615, 2616). With the permission of the Director, students whose principal applied study is keyboard, guitar or voice may substitute a maximum of 2 credit hours chosen from Music 3221 to 3282 and/or Music 3510 to 3516 for 2 credit hours of large ensemble.  
*Note: Placement in ensembles may require an audition, and is subject to approval by the Director. Students will normally be placed in the ensemble(s) most closely related to their principal applied study.*
3. Three credit hours chosen from music theory courses beyond the 2000 level.
4. Music 4094, 4095.
5. Nine additional credit hours beyond the 2000 level in music history.
6. Six credit hours chosen from History and/or Anthropology (Faculty of Arts).
7. Fifteen additional credit hours chosen from music courses beyond the 1000 level and meeting the following requirements:
  - a. Credit will not be given for more than 14 credit hours of large ensemble (Music 2611-2616) toward the Bachelor of Music degree.
  - b. Students in the History and Literature of Music major may take a maximum of 8 credit hours in Music 3510-3516 beyond the credits permitted in 2. above.
  - c. Students whose principal applied study is voice must include Music 2700 and 2701.
8. Twenty-four credit hours chosen from disciplines other than music and music education, including at least 6 credit hours from courses in English and/or designated research/writing courses and at least 12 credit hours in a language or languages other than English.

## 5.8 Joint Major in Music Performance and History and Literature of Music

To be awarded the degree of Bachelor of Music with a joint major in Music Performance and History and Literature of Music, a candidate shall comply with the School's regulations, and successfully complete a minimum of 124 credit hours, including the 44 credit hours in the Core Program. The remaining 80 credit hours shall be chosen as follows:

1. Music 345A/B; 445A/B.
2. Eight credit hours of large ensemble (Music 2611, 2612, 2613, 2614, 2615, 2616). With the permission of the Director, students whose principal applied study is keyboard, guitar or voice may substitute a maximum of 2 credit hours chosen from Music 3221 to 3282 and/or Music 3510 to 3516 for credit hours of large ensemble.  
*Note: Placement in ensembles may require an audition, and is subject to approval by the Director. Students will normally be placed in the ensemble(s) most closely related to their principal applied study.*
3. Three credit hours chosen from music theory courses beyond the 2000 level.
4. Music 4094 and Music 4095.
5. Six credit hours chosen from Music 3510 to 3516. With the permission of the Director, students whose principal applied study is voice may substitute a maximum of 4 credit hours from Music 2616 and/or a maximum of 4 credit hours from Music 3762-3763.
6. Twenty-one additional credit hours chosen from music courses beyond the 1000 level. Of these 21 credit hours:
  - a. A minimum of 9 credit hours music must be chosen from courses beyond the 2000 level in music history;
  - b. A maximum of 4 credit hours can be used from large ensembles (Music 2611-2616);
  - c. A maximum of 8 credit hours can be used from chamber music (Music 3510-3516);

- d. A maximum of 9 credit hours can be used from Music 241A/B, 346A/B and 446A/B;
- e. A maximum of 9 credit hours of the following may be substituted for music electives: Education 2510, 2520, 2530, 3920, 3925, 4835, 4845.

Note: *Please note that Music Education majors have priority in registering for these courses; spaces may not be available for other majors.*

7. Twenty-four credit hours chosen from disciplines other than music, including at least 6 credit hours chosen from courses in English and/or designated research/writing courses, 6 credit hours in History and/or Anthropology, and 12 credit hours in a language or languages other than English. Students whose principal applied study is voice must include at least 3 credit hours in each of Italian, German, and French.

## 5.9 Joint Major in Music Performance and Theory and Composition

To be awarded the degree of Bachelor of Music with a joint major in Music Performance and Theory and Composition, a candidate shall comply with the School's regulations, and successfully complete a minimum of 125 credit hours, including the 44 credit hours in the Core Program. The remaining 81 credit hours shall be chosen as follows:

1. Music 345A/B, 445A/B
2. Eight credit hours of large ensemble (Music 2611, 2612, 2613, 2614, 2615, 2616). With the permission of the Director, students whose principal applied study is keyboard, guitar or voice may substitute a maximum of 2 credit hours chosen from Music 3221 to 3282 and/or Music 3510 to 3516 for 2 credit hours of large ensemble.  
Note: *Placement in ensembles may require an audition, and is subject to approval by the Director. Students will normally be placed in the ensemble(s) most closely related to their principal applied study.*
3. Music 3100, 3104, 3105, 3112, and one of Music 3106 or 3108.
4. Music 2311, 3311, 3312, 3313 and 3314.
5. Six credit hours chosen from Music 3510 to 3516. With the permission of the Director, students whose principal applied study is voice may substitute a maximum of 4 credit hours from Music 2616 and/or a maximum of 4 credit hours from Music 3762-3763.
6. Four credit hours chosen from Music 3221, 3222, 3231, 3232, 3233, 3241, 3242, 3261, 3271, 3281, 3282.
7. Six credit hours chosen from courses beyond the 2000 level in music theory (in addition to those listed in 3. above).
8. Twenty-four credit hours chosen from disciplines other than music or music education, including at least 6 credit hours chosen from courses in English and/or designated research/writing courses. Students whose principal applied study is voice must include at least 3 credit hours in each of Italian, German, and French.

## 6 Bachelor of Music (Honours)

The Bachelor of Music (Honours) will be awarded to candidates in the Performance, General Musical Studies, Theory and Composition, and History and Literature of Music majors and candidates in the Joint programs of Performance and History and Literature of Music, and Performance and Theory and Composition who:

1. are graduating with First Class standing;
2. meet all the graduation requirements set forward in the regulations for the Bachelor of Music degree for their major; and
3. have attained a minimum average of 82% in all music courses included in the degree.

## 7 Minor in Music History

1. This minor is available to students in the Bachelor of Arts, Bachelor of Science, Bachelor of Business Administration, Bachelor of Commerce (Cooperative), and the physical education and recreation degrees offered by the School of Human Kinetics and Recreation. The minor in music history is not applicable to the Bachelor of Music degree.
2. To be admitted to the minor in music history, students must meet the prerequisites for Music 1107 and 1127.
3. Students shall complete the following requirements (27 credit hours) for the minor in music history:
  - a. Music 1107, 1108, 1117, 1118, 1127 or 1137, and 1128 or 1138.
  - b. Music 1002, 1003, 2002, and 2003.
  - c. An additional 6 credit hours in music history, chosen from courses at the 3000 or 4000 level.
4. Course prerequisites stipulated in the course descriptions must be met. Please note that most music courses are not offered every semester, and some are offered only in alternate years.

## 8 Interdisciplinary Major in Drama and Music (Bachelor of Arts)

1. Students must complete at least 27 credit hours in Music, as follows:
  - a. Music 2011 and 2012.
  - b. Music 1107, 1108, 1117, 1118, 1127 or 1137, and 1128 or 1138
  - c. Music 2107 and 2117.
  - d. Music 2311.
  - e. Music 3007 or Music 2013.
  - f. Two credit hours of large ensemble, chosen from Music 2611-2616.
2. Further courses in music theory and/or music history may be chosen as Arts electives.
3. Course prerequisites stipulated in the course descriptions must be met. In particular, note the prerequisites for Music 1107 and 1127.
4. Most music courses are not offered every semester, and some are offered only in alternate years.

## 9 Interdisciplinary Minor in Music and Culture

1. This minor is available to students in the Bachelor of Arts, Bachelor of Science, Bachelor of Business Administration, Bachelor of Commerce (Cooperative), Bachelor of Recreation, Bachelor of Recreation (Honours), Bachelor of Recreation (Cooperative), and Bachelor of Recreation (Cooperative) (Honours). The minor in Music and Culture is not applicable to the Bachelor of Music degree.

2. Students shall complete 25 credit hours for the minor in music and culture, as follows:
  - a. Music 1120 or Music 1107.
  - b. Music 1116 or Music 1117.
  - c. Music/Folklore/Anthropology 4440.
  - d. Music 2012 or 2013.
  - e. One of Music 2011, Music 3017/Folk 3200, and Music 3018/Folk 3618.
  - f. One of Music 3014, 3015, and 3016.
  - g. One of Music 2021, 2022, and 2023.
  - h. Two additional courses chosen from Music 1108 or the courses listed in d., e., f., or g. above.

## 10 Course List

In accordance with Senate's *Policy Regarding Inactive Courses*, the course descriptions for courses which have not been offered in the previous three academic years and which are not scheduled to be offered in the current academic year have been removed from the following listing. For information about any of these inactive courses, please contact the Director of the School.

### 10.1 Applied Music Courses

Note: *With the exception of Music 2611-2616, courses in applied music are available only to candidates for the degree of Bachelor of Music.*

**140A/B Principal Applied Study I (4 cr. hrs.)** requires one hour per week of individual instruction (vocal or instrumental). Required attendance at School of Music recitals.  
Co-requisite: Music 2611.

**141A/B Second Principal Applied Study** - inactive course.

**240A/B Principal Applied Study II (4 cr. hrs.)** is a continuation of Music 140A/B. One hour per week of individual instruction (vocal or instrumental). Required attendance at School of Music recitals.  
Prerequisite: Music 140A/B.

Co-requisite: One of: Music 2611, 2612, 2613, 2614, 2615, 2616.  
Note: *Music education students must include in their program at least 4 cr. hrs. chosen from Music 2611, 2612, 2613, and 2614.*

**241A/B Second Principal Applied Study** - inactive course.

**2611 Festival Choir (1 cr. hr. per semester. Maximum: 10 cr. hrs.)** requires three hours rehearsal per week. Attendance is required.

**2612 Chamber Choir (1 cr. hr. per semester. Maximum: 8 cr. hrs.)** requires three hours rehearsal per week. Attendance is required.

**2613 Chamber Orchestra (1 cr. hr. per semester. Maximum: 8 cr. hrs.)** requires three hours rehearsal per week. Attendance is required.

**2614 Concert Band (1 cr. hr. per semester. Maximum: 8 cr. hrs.)** requires three hours rehearsal per week. Attendance is required.

**2615 Jazz Ensemble (1 cr. hr. per semester. Maximum: 8 cr. hrs.)** requires three hours rehearsal per week. Attendance is required.

**2616 Opera Workshop (1 cr. hr. per semester. Maximum: 8 cr. hrs.)** requires three hours rehearsal per week. Attendance is required.

Note: *Music 2611-2616 are available for credit to any student who successfully auditions for participation in the ensemble. To audition, please contact the instructor or the School of Music office before the beginning of the semester. Please note:*

*These courses are not applicable as electives under the Bachelor of Arts program.*

*Students in the Faculty of Education should consult the Office of Student Services in the Faculty of Education regarding applicability of these courses to their degree.*

**2700 Lyric Diction I (1 cr. hr.)** is a study of English, German, French and Italian lyric diction. The International Phonetic Alphabet will be introduced and applied to singing in these four languages. Open only to students whose principal applied study is voice.

**2701 Lyric Diction II (1 cr. hr.)** is a continuation of Music 2700. Open only to students whose principal applied study is voice.  
Prerequisite: Music 2700.

**340A/B Principal Applied Study III (4 cr. hrs.)** is a continuation of Music 240A/B, for students whose Major is other than Performance. One hour per week of individual instruction. Required attendance at School of Music recitals.

Prerequisites: Music 240A/B and successful completion of Music 1003, 1108, 1118 and 1128 or 1138.

Co-requisite: One of: Music 2611, 2612, 2613, 2614, 2615, 2616.

Notes: 1. *Music education students must include in their program at least 4 cr. hrs. chosen from Music 2611, 2612, 2613, 2614.*

2. *Students may not receive credit for both Music 340A/B and 345A/B.*

**345A/B Principal Applied Study III - Performance (6 cr. hrs.)** is a

continuation of Music 240A/B. A more intensive approach to performance than in Music 340A/B. Open to Performance Majors only. One hour per week of individual instruction. Required attendance at School of Music recitals. Students are required to present a public recital consisting of 25 to 35 minutes of music to be given before the last day of classes in the second semester of the course.

Prerequisites: Music 240A/B and successful completion of Music 1003, 1108, 1118 and 1128 or 1138.

Co-requisite: One of: Music 2611, 2612, 2613, 2614, 2615, 2616.

Note: *Students may not receive credit for both Music 340A/B and 345A/B.*

**346A/B Second Principal Applied Study** - inactive course.

**3510 Introduction to Chamber Music (3 cr. hrs.)** is a study of selected chamber music repertoire from the Renaissance to the present day. Ensembles will be organized to give performances.  
Prerequisite: Music 240B or permission of instructor.

**3511 Chamber Music (1 cr. hr. per semester. Maximum: 6 cr. hrs.)** requires the ensemble to prepare a recital of 10-15 minutes of music to be performed before the last day of classes in the semester. Each ensemble receives six hours of coaching in preparation for the performance. Repertoire to be performed must be approved prior to registration.  
Prerequisite: Permission of the Director.

**3512 Chamber Music (2 cr. hrs. per semester. Maximum: 8 cr. hrs.)** requires the ensemble to prepare a recital of 18-22 minutes of music to be performed before the last day of classes in the semester. Each ensemble receives nine hours of coaching in preparation for the performance. Repertoire to be performed must be approved prior to registration.  
Prerequisite: A minimum final grade of 75% in the student's most recently completed principal applied study course and permission of the Director.

**3513 Chamber Music (3 cr. hrs. per semester. Maximum: 12 cr. hrs.)** requires the ensemble to prepare a recital of 25-30 minutes of music to be performed before the last day of classes in the semester. Each ensemble receives twelve hours of coaching in preparation for the performance. Repertoire to be performed must be approved prior to registration.  
Prerequisite: A minimum final grade of 80% in the student's most recently completed principal applied study course and permission of the Director.

**3514 Small Ensemble (1 cr. hr. per semester. Maximum: 6 cr. hrs.)** is a conducted ensemble. Two hours per week of rehearsal.  
Prerequisite: Permission of the Director.

**3515 Accompaniment (1 cr. hr. per semester. Maximum: 4 cr. hrs.)** requires the students to meet for one hour per week in a masterclass. Coaching will be given to prepare for performance of a 15- to 20-minute program with a singer or instrumentalist. Repertoire must be approved prior to registration. Normally offered in the winter semester only. This course is open to students whose principal applied study is a keyboard instrument; others by permission of the Director. Attendance is required.

**3516 Accompaniment (2 cr. hrs. per semester. Maximum: 8 cr. hrs.)** requires the students to meet for one hour per week in a masterclass. Coaching will be given to prepare for performance of a half-hour program with a singer or instrumentalist. Repertoire must be approved prior to registration. Normally offered in the winter semester only. Open to students whose principal applied study is a keyboard instrument; others by permission of the Director.

**3605 Music Theatre Workshop.** - inactive course.

**3703 Career Skills (1 cr. hr.)** is an exploration of careers in music. Topics include preparation of business plans, grant applications, press kits and promotional materials: tax, legal and business issues in the arts, and the study of successful arts enterprises.  
Prerequisite: Music 240B.

**3711 Jazz Styles and Improvisation** is an applied course for singers and instrumentalists, which aims to integrate the theory and practice of jazz. Jazz styles and improvisation will be explored through listening (recordings and live performance), imitation, and improvisation of selected jazz standards. Prerequisite: Music 240B or permission of the instructor.  
Prerequisite: Music 240B or permission of the instructor.

**3712 Improvisation (3 cr. hrs.)** is an introduction to the art and practice of Improvisation through guided ensemble exploration and performance, score study and the application of contemporary performance practice.  
Prerequisite: Music 240A/B.

**3722 Brass Seminar (1 cr. hr. per semester. Maximum: 2 cr. hrs.)** has topics selected from: issues of brass performance practice, history of brass instruments, brass literature and pedagogy, performance anxiety, comparative performances of brass repertoire, and other issues of special relevance to brass players. Open to students whose principal applied study is a brass instrument. Others by permission of the Director.

**3732 Woodwind Seminar (1 cr. hr. per semester. Maximum: 2 cr. hrs.)** has topics selected from: issues of woodwind performance practice, history of woodwind instruments, woodwind literature and pedagogy, performance anxiety, comparative performances of woodwind repertoire, and other issues of special relevance to woodwind players. Open to students whose principal applied study is a woodwind instrument. Others by permission of the Director.

**3742 String Seminar (1 cr. hr. per semester. Maximum: 2 cr. hrs.)** has topics selected from: issues of string performance practice, history of string instruments, string literature and pedagogy, performance anxiety, comparative performances of string repertoire, and other issues of special relevance to string players. Open to students whose principal applied study is a string instrument. Others by permission of the Director.

**3751 Studio Pedagogy (3 cr. hrs.)** is designed to provide students with a basic knowledge of resources and pedagogical approaches used in studio teaching at various levels. May include guest masterclasses and lectures. Prerequisites/Co-requisites: Music 140B or permission of the instructor. Note: *Students may not receive credit for both Music 3751 and the former Music 3773.*

**3762 Vocal Pedagogy I (2 cr. hrs.)** has topics selected from: vocal technique, vocal health, methods for teaching various voice types and levels of ability, brief overview of various individual approaches in this history of vocal pedagogy. Prerequisite: Music 140B in voice.

Note: *This course is not available to students with two or more credits in the former Music 3761. No more than 4 credits of Music 3761/3762/3763 may be credited toward the Bachelor of Music degree.*

**3763 Vocal Pedagogy II (2 cr. hrs.)** has topics selected from: managing a teaching studio, communications in studio teaching dealing with performance anxiety and other topics of importance to studio voice instruction, as well as the application of topics covered in Music 3762. Prerequisite: Music 140B in voice and Music 3762.

Note: *This course is not available to students with two or more credits in the former Music 3761. No more than 4 credits of Music 3761/3762/3763 may be credited toward the Bachelor of Music degree.*

**3774 Piano Pedagogy (3 cr. hrs.)** is designed to provide students with a basic knowledge of resources and pedagogical approaches used in piano studio teaching at various levels. May include guest masterclasses and lectures.

Prerequisites/Co-requisites: Music 140B or permission of the instructor. Note: *Students may not receive credit for both Music 3774 and the former Music 3772.*

**440A/B Principal Applied Study IV (4 cr. hrs.)** is a continuation of Music 340A/B, for students whose major is other than Performance. One hour per week of individual instruction. Required attendance at School of Music recitals.

Prerequisites: Music 340A/B and successful completion of Music 2003, 2108, 2118 and 2128 or 2138.

Co-requisite: One of: Music 2611, 2612, 2613, 2614, 2615, 2616.

Notes: 1. *Music education majors must include in their program at least 4 cr. hrs. chosen from Music 2611, 2612, 2613, 2614.*

2. *Students may not receive credit for both Music 440A/B and 445A/B.*

**445A/B Principal Applied Study IV - Performance (6 cr. hrs.)** is a continuation of Music 345A/B. Open to Performance Majors only. One hour per week of individual instruction. Required attendance at School of Music recitals. Students are required to present a public recital consisting of 50 to 60 minutes of music with program notes. This recital will normally take place in the second semester, before the last day of classes. A minimum grade of 75% is required to pass Music 445B.

Prerequisites: Music 345A/B and successful completion of Music 2003, 2108, 2118 and 2128 or 2138.

Co-requisite: One of: Music 2611, 2612, 2613, 2614, 2615, 2616.

Note: *Students may not receive credit for both Music 440A/B and 445A/B.*

**446A/B Second Principal Applied Study** - inactive course.

**4503 Special Topics in Applied Music (1 cr. hr. per semester Maximum: 3 cr. hrs.)** will have topics to be studied announced by the School of Music.

**4504 Special Topics in Applied Music (2 cr. hrs. per semester Maximum: 4 cr. hrs.)** will have topics to be studied announced by the School of Music.

**4505 Special Topics in Applied Music (3 cr. hrs. per semester Maximum: 6 cr. hrs.)** will have topics to be studied announced by the School of Music.

*for the degree of Bachelor of Music except where specified.*

**2311 Voice/Choral Materials I (3 cr. hrs.)** is a practical study, in a class situation, of vocal production, choral conducting and rehearsal techniques. This course is open to Bachelor of Music degree students and students in the Music Concentration Program for the Bachelor of Education (Primary or Elementary) degree.

**2312 Voice/Choral Materials II (3 cr. hrs.)** is a continuation of Music 2311. Prerequisite: Music 2311.

**3221 Brass Techniques I (1 cr. hr.)** meets one hour per week. Practical study, in a class situation, of the basic techniques of playing brass instruments.

**3222 Brass Techniques II (1 cr. hr.)** meets one hour per week. A continuation of Music 3221. Students whose principal applied study is a brass instrument must have the permission of the instructor to take this course. Prerequisite: Music 3221.

**3231 Flute Techniques (1 cr. hr.)** meets one hour per week. Practical study, in a class situation, of the basic techniques of playing the flute. This course may not be taken for credit by students whose principal applied study is flute.

**3232 Single Reed Techniques (1 cr. hr.)** meets one hour per week. Practical study, in a class situation, of the basic techniques of playing the clarinet and/or saxophone. Students whose principal applied study is clarinet or saxophone must have the permission of the instructor to take this course.

**3233 Double Reed Techniques (1 cr. hr.)** meets one hour per week. Practical study, in a class situation, of the basic techniques of playing the oboe and/or bassoon. Students whose principal applied study is oboe or bassoon must have the permission of the instructor to take this course.

**3241 Upper String Techniques (1 cr. hr.)** meets one hour per week. Practical study, in a class situation, of the basic techniques of playing the violin and viola. This course may not be taken for credit by students whose principal applied study is violin or viola.

**3242 Lower String Techniques (1 cr. hr.)** meets one hour per week. Practical study, in a class situation, of the basic techniques of playing the cello and string bass. Students whose principal applied study is cello or string bass must have the permission of the instructor to take this course.

**3261 Guitar techniques (1 cr. hr.)** meets one hour per week. Practical study, in a class situation, of the basic techniques of playing the guitar. This course may not be taken for credit by students whose principal applied study is guitar.

**3271 Organ techniques (1 cr. hr.)** meets one hour per week. Practical study, in a class situation, of the basic techniques of playing the organ. Open only to students whose principal applied study is piano. Others by permission of the instructor.

**3272 Harpsichord Techniques (1 cr. hr.)** meets one hour per week. Practical study in a class situation of the basic techniques of playing the harpsichord. Open only to students whose principal applied study is piano or organ. Others by permission of the instructor.

**3281 Percussion Techniques I (1 cr. hr.)** meets one hour per week. Practical study, in a class situation, of the basic techniques of playing percussion instruments. This course may not be taken for credit by students whose principal applied study is percussion.

**3282 Percussion Techniques II (1 cr. hr.)** meets one hour per week. Continuation of Music 3281. This course may not be taken for credit by students whose principal applied study is percussion. Prerequisite: Music 3281.

**3311 Instrumental Conducting I (1 cr. hr.)** meets one hour per week. Practical study of conducting and rehearsal techniques for band and orchestra.

Prerequisite: Music 2311.

Co-requisite: Music 3313.

**3312 Instrumental Conducting II (1 cr. hr.)** meets one hour per week. A continuation of Music 3311.

Prerequisite: Music 3311.

Co-requisite: Music 3314.

**3313 Instrumental Lab (0 cr. hrs.)** meets 1½ hours per week. Practical application of rehearsal and instrumental techniques in a band/ orchestra setting.

Co-requisite: Music 3311.

**3314 Instrumental Lab (1 cr. hr.)** meets 1½ hours per week. Continuation of Music 3313.

Prerequisite: Music 3313.

Co-requisite: Music 3312.

**3315 Instrumental Lab (0 cr. hrs.)** meets 1½ hours per week. Practical application of rehearsal and instrumental techniques in a band/orchestra setting.

Prerequisite/Co-requisite: One of Music 3221, 3222, 3231, 3232, 3233, 3241, 3242, 3281, 3282.

## 10.2 Ensemble Techniques Courses

Note: *All courses in ensemble techniques are available only to candidates*



**3316 Instrumental Lab (1 cr. hr.)** meets 1½ hours per week. Continuation of Music 3315.

Prerequisite: Music 3315.

**4311 Advanced Choral Conducting** - inactive course.

**4312 Advanced Instrumental Conducting** - inactive course.

**4313 Instrumental Conducting III (1 cr. hr.)** is the study of advanced applications of baton technique, gesture, other forms of nonverbal communication, and verbal communication as they relate to the interpretation of instrumental scores and the conducting of instrumental ensembles. Score preparation and rehearsal planning are included in this study. Students are assigned off-campus conducting experiences with instrumental ensembles. Admission by audition only.

Prerequisite: Music 3312.

## 10.3 Music Theory Courses

**1107 Materials and Techniques of Music I (3 cr. hrs.)** is the study of the basic materials of the common-practice period, including a review of rudiments with emphasis on building an understanding of the underlying concepts involved; introduction to melody writing; introduction to voice leading with emphasis on chorale style; analysis and composition of smaller formal elements. Three hours per week.

Prerequisite: Music 1120 with a minimum mark of 75% or successful completion of the Theory Placement Test.

Co-requisite: Music 1117.

Note: *Credit may not be obtained for more than one of Music 110A, Music 1107 and Music 1113.*

**1108 Materials and Techniques of Music II (3 cr. hrs.)** is a continuation of Music 1107. Harmonic vocabulary is expanded to include all diatonic triads and seventh chords, with an introduction to chromatic harmony; beginning study of writing for keyboard and band/orchestra instruments; analysis and composition of small binary and ternary forms, introduction to jazz harmony. Three hours per week.

Prerequisite: Music 1107.

Note: *Credit may not be obtained for more than one of Music 110B, Music 1108 and Music 1114.*

**1116 Basic Musicianship (1 cr. hr.)** is an introduction to sight-singing and dictation for students whose level of preparation is not adequate for Music 1117. Two hours per week.

Note: *Credit for this course may not be applied to the Bachelor of Music degree.*

**1117 Aural Skills I (1 cr. hr.)** is a course on sight-singing and dictation. Two hours per week.

Prerequisite: Minimum grade of 75% in Music 1116 or successful completion of the Theory Placement Test.

Co-requisite: Music 1107.

**1118 Aural Skills II (1 cr. hr.)** is a continuation of Music 1117. Two hours per week.

Prerequisites: Music 1107, Music 1117.

**1120 Rudiments I (3 cr. hrs.)** is an introductory course in music rudiments and theory. Development of aural skills is emphasized. Three hours per week.

Note: *Credit for this course may not be applied to the Bachelor of Music Degree.*

**1127 Keyboard Harmony I (0 cr. hr.)** is an introduction to practical keyboard harmony skills. One hour per week. Students whose principal applied study is a keyboard instrument may not receive credit for this course.

Prerequisite: successful completion of the Piano Proficiency Test.

Prerequisite/Co-requisite: Music 1107.

**1128 Keyboard Harmony II (1 cr. hr.)** is a continuation of Music 1127. One hour per week. Students whose principal applied study is a keyboard instrument may not receive credit for this course.

Prerequisites: Music 1107, 1127.

**1137 Advanced Keyboard Harmony I (0 cr. hr.)** is keyboard harmony skills for keyboard players. One hour per week. For students whose principal applied study is a keyboard instrument. Others by permission of the Director.

Prerequisite/Co-requisite: Music 1107.

**1138 Advanced Keyboard Harmony II (1 cr. hr.)** is a continuation of Music 1137. One hour per week. For students whose principal applied study is a keyboard instrument. Others by permission of the Director.

Prerequisites: Music 1107, Music 1137.

**2107 Materials and Techniques of Music III (3 cr. hrs.)** is a study of chromatic harmony with emphasis on both writing and analysis. Continuing studies in techniques of orchestration; study of larger binary and compound ternary forms. Three hours per week.

Prerequisite: Music 1108.

Note: *Credit may not be obtained for more than one of Music 210A, Music 2107 and Music 2113.*

**2108 Materials and Techniques of Music IV (3 cr. hrs.)** is a continuing study of chromatic harmony with an emphasis on enharmonic modulation and other advanced chromatic techniques. Introduction to Impressionism;

introduction to selected 20th-century compositional techniques; use of form in late 19th- and 20th-century composition.

Written work will include both analysis and composition exercises in the styles studied. Three hours per week.

Prerequisite: Music 2107.

Note: *Credit may not be obtained for more than one of Music 210B, Music 2108 and Music 2114.*

**2117 Aural Skills III (1 cr. hr.)** is a continuation of Music 1118. Two hours per week.

Prerequisites: Music 1108, Music 1118.

**2118 Aural Skills IV (1 cr. hr.)** is a continuation of Music 2117. Two hours per week.

Prerequisites: Music 2107, Music 2117.

**2127 Keyboard Harmony III (0 cr. hr.)** is a continuation of Music 1128. One hour per week. Students whose principal applied study is a keyboard instrument may not receive credit for this course.

Prerequisites: Music 1108, Music 1128.

**2128 Keyboard Harmony IV (1 cr. hr.)** is a continuation of Music 2127. One hour per week. Students whose principal applied study is a keyboard instrument may not receive credit for this course.

Prerequisites: Music 2107, Music 2127.

**2137 Advanced Keyboard Harmony III (0 cr. hr.)** is a continuation of Music 1138. One hour per week. For students whose principal applied study is a keyboard instrument. Others by permission of the Director.

Prerequisites: Music 1108, Music 1138.

**2138 Advanced Keyboard Harmony IV (1 cr. hr.)** is a continuation of Music 2137. One hour per week. For students whose principal applied study is a keyboard instrument. Others by permission of the Director.

Prerequisites: Music 2107, Music 2137.

**3100 Composition I (3 cr. hrs.)** is an introduction to basic compositional techniques and their application through the writing of original music for choral and/or instrumental resources. No previous training in composition is required.

Prerequisite: Music 1108.

**3104 Electronic Music Studio Techniques I (3 cr. hrs.)** is a course designed to give basic instruction in the theory, technique, and philosophy of electronic music composition. Students obtain the skills necessary to operate the equipment of an electronic music studio (including mixers, synthesizers, and samplers) and to use them in appropriate and creative ways. Objectives of the course are achieved through lecture, lab experiences, listening and practical application.

Prerequisite: Music 1108.

**3105 Twentieth Century Harmony (3 cr. hrs.)** is a study of compositional devices used in the twentieth century. Topics include minimalism, new tonality, aleatorism, atonality, set theory, serial techniques, and electronic music.

Prerequisite: Music 2108.

**3106 Sixteenth-Century Counterpoint (3 cr. hrs.)** is a course combining the analytical study of 16th-century sacred polyphony with an emphasis on the development of compositional skills in this style. Students will be required to write two- and three-part counterpoint exercises and a motet. The principal composers studied will be Palestrina, Lassus and Victoria. Some listening and singing assignments are required.

Prerequisite: Music 1108.

**3107 Materials and Techniques of Music V (3 cr. hrs.)** is a study of major post-Baroque forms and genres, including sonata, rondo, sonata-rondo, variation, symphony, and concerto, as well as selected twentieth-century styles and techniques. Three hours per week.

Prerequisites: Music 2108, 1118, and 1128 or 1138.

Note: *Credit may not be obtained for more than one of Music 310B, Music 3107 and Music 3114.*

**3108 Eighteenth-Century Counterpoint** - inactive course.

**3109 Jazz Theory and Arranging (3 cr. hrs.)** is an introduction to jazz theory and the principles of arranging for jazz ensembles.

Prerequisite: Music 2108.

**3112 Orchestration and Arranging 1 (3 cr. Hrs.)** examines the principles of Orchestration and Arranging for instrumental ensembles with emphasis on the small ensemble.

Prerequisite: Music 2108 or permission of the instructor.

Note: *Credit may not be received for both Music 3102 and Music 3112.*

**3117 Aural Skills V (1 cr. hr.)** is a continuation of Music 2118. Two hours per week.

Prerequisites: Music 2108, Music 2118.

**4100 Advanced Composition (3 cr. hrs. per semester. Maximum: 6 cr. hrs.)** is a continuation of Music 3100.

Prerequisite: Music 3100.

**4103 Theory/Composition Seminar** - inactive course.

**4104 Electronic Music Studio Techniques II** - inactive course.

**4105 Special Topics in Music Theory (1 cr. hr. per semester Maximum:**

3 cr. hrs.) will have topics to be studied announced by the School of Music.

**4106 Special Topics in Music Theory (2 cr. hrs. per semester Maximum: 4 cr. hrs.)** will have topics to be studied announced by the School of Music.

**4107 Special Topics in Music Theory (3 cr. hrs. per semester Maximum: 6 cr. hrs.)** will have topics to be studied announced by the School of Music.

**4112 Orchestration and Arranging 2 (3 cr. hrs.)** examines the principles of Orchestration and Arranging for instrumental ensembles with emphasis on the large ensemble.

Prerequisite: Music 3112, Music 3012 or permission of the instructor.

Note: *Credit may not be received for both Music 4102 and Music 4112.*

## 10.4 Music History Courses

**1002 Music History I (3 cr. hrs.)** is an intensive survey, through selected compositions, of the development of musical styles in Europe from ancient times to the end of the Medieval period. The course will introduce the student to the terms, names and dates of music history, to theories of history, to stylistic analysis of specific works through musical scores and recordings, and to methods for expressing historical concepts. This course has strong listening and writing components. Three hours per week.

Prerequisites: Music 1120 or successful completion of theory placement test or admission to the B. Music degree program.

**1003 Music History II (3 cr. hrs.)** is a continuation of Music 1002. An intensive survey, through selected compositions, of the development of musical styles in Europe in the Renaissance and Baroque periods. This course has strong listening and writing components. Three hours per week.

Prerequisite: Music 1002.

**2002 Music History III (3 cr. hrs.)** is a continuation of Music 1003. An intensive survey, through selected compositions, of the development of musical styles in Europe in the Classical and Romantic Periods. This course has strong listening and writing components. Three hours per week.

Prerequisite: Music 1003.

**2003 Music History IV (3 cr. hrs.)** is a continuation of Music 2002. An intensive survey, through selected compositions, of the development of musical styles in the Western world from post-Romanticism and Impressionism to the present, including reference to the history of music in Canada. This course has strong listening and writing components. Three hours per week.

Prerequisite: Music 2002.

**2011 North American Popular Music (3 cr. hrs.)** is a survey of the major genres of North American popular music from the beginning of the 20th century to the 1970's. The course has three organizing themes: 1) the influence of Euro-American musics, African-American musics, and Latin American musics on popular music, 2) the relationship between popular music, capitalism, and technology, and 3) popular music as a medium for the portrayal of identity. This course has a strong listening component. The ability to read music is not required.

No prerequisite.

Note: *Credit for this course may not be applied to the Bachelor of Music Degree.*

**2012 Understanding Classical Music: Introduction Through Guided Listening (3 cr. hrs.)** is a course designed to enhance and develop listening skills and an understanding of the basic elements of music. Form and musical style in Western classical music will be explored within a cultural and historical context. Through guided listening, the student will be exposed to a variety of musical styles and traditions. This course has a strong listening component. The ability to read music is not required.

No prerequisite.

Notes: 1. *Credit for this course may not be applied to the Bachelor of Music Degree.*

2. *Students who have completed any of Music 1000, 1001, 1002, 1003, 1010, 1020 or 1021 will not receive credit for this course.*

**2013 Twentieth-Century Musicals (3 cr. hrs.)** (same as English 2013) is a survey of twentieth-century musical theatre. Selected works, presenting different styles and periods, will be examined in detail. There will be a strong, required listening/viewing component to this course. The ability to read music is not required. Music 2013 cannot be taken for credit by students enrolled in the Bachelor of Music program.

Notes: 1. *Credit for this course may not be applied to the Bachelor of Music Degree.*

2. *Credit can be received for only one of Music 2013, Music 3007, or English 2013.*

**2021 Newfoundland and Labrador Folksinging (3 cr. hrs.)** is an introduction to the sociocultural contexts, functions, and meanings of folksong in Newfoundland and Labrador. Proceeding from this contextual base drawn from oral and scholarly histories, the course offers practical instruction by a tradition-bearer in the singing of traditional Newfoundland and Labrador tunes and texts, using the techniques of aural transmission and assisted by the written medium where appropriate.

Prerequisite: Permission of the director.

Note: *No more than three credits from the 2021-2023 series may be applied toward the Bachelor of Music Degree as unspecified music electives.*

**2022 Newfoundland and Labrador Fiddling (3 cr. hrs.)** is an introduction to the sociocultural contexts, functions, and meanings of fiddling in

Newfoundland and Labrador. Proceeding from this contextual base drawn from oral histories, the course offers practical instruction by a tradition-bearer on the fiddle, using the techniques of aural transmission and assisted by the written medium where appropriate.

Prerequisite: Permission of the director.

Note: *No more than three credits from the 2021-2023 series may be applied toward the Bachelor of Music Degree as unspecified music electives.*

**2023 Newfoundland and Labrador Accordion (3 cr. hrs.)** is an introduction to the sociocultural contexts, functions, and meanings of accordion music in Newfoundland and Labrador. Proceeding from this contextual base drawn from oral histories, the course offers practical instruction by a tradition-bearer on the button accordion, using the techniques of aural transmission and assisted by the written medium where appropriate.

Prerequisite: Permission of the director.

Note: *No more than three credits from the 2021-2023 series may be applied toward the Bachelor of Music Degree as an unspecified music elective.*

**3004 The Development of Symphonic Music (3 cr. hrs.)** (formerly 3020) is a study of the development of symphonic literature from the late Baroque era to the present day. Selected compositions, representing different periods and styles, will be examined in detail. This course has a strong listening component.

Prerequisite: Music 2002.

**3005 The Development of Opera (3 cr. hrs.)** is a study of the development of opera from the beginnings to the present day. Selected operas, representing different periods and styles, will be examined in detail. This course has a strong listening component.

Prerequisite: Music 2002.

**3006 The History of the Concerto (3 cr. hrs.)** is a study of the development of the concerto from the late Baroque until the present day. Selected compositions, representing different styles and periods, will be examined in detail. This course has a strong listening component.

Prerequisite: Music 2002.

**3007 A History of Popular Music in Drama (3 cr. hrs.)** is a survey of popular music styles in drama from the rise of the *Singspiel* to the musicals of Andrew Lloyd Weber. Selected works, representing different styles and periods, will be examined in detail. This course has a strong listening component.

Prerequisite: Music 2107 or permission of the instructor.

**3014 World Music: Musics of Asia and Oceania (3 cr. hrs.)** is an examination of musical theory, genres, instruments, aesthetics, and functions of music in Asia and Oceania, including the classical music of the Indian subcontinent, ritual musics of East Asia, gong-chime ensembles of Southeast Asia, and traditional musics of Polynesia and Australia. This course has a strong listening component.

Prerequisite: Music 1120 with a minimum mark of 75% or equivalent and completion of at least 24 credit hours of university course work.

**3015 World Music: Music of Africa and the Americas (3 cr. hrs.)** is an examination of musical theory, genres, instruments, aesthetics, and functions of music in Africa and the Americas, including traditional African musics, neo-African musics of the Americas, Native American musics, and traditional South American musics. This course has a strong listening component.

Prerequisite: Music 1120 with a minimum mark of 75% or equivalent and completion of at least 24 credit hours of university course work.

**3016 Canadian Musical Traditions (3 cr. hrs.)** is a survey of musical streams in Canadian music history from colonial times to the present, including indigenous and transplanted musical traditions, and Canadian art music. This course has a strong listening component.

Prerequisite: Music 1120 with a minimum mark of 75% or equivalent and completion of at least 24 credit hours of university course work.

**3017 Folksong (3 cr. hrs.)** (same as Folklore 3200.) is an introduction to the full range of traditional verse, song and music. Stress primarily on the songs of Canada, the United States and the British Isles, with attention to Newfoundland parallels. Examination of traditional vocal and instrumental styles as well as verse forms. Some reference to non-Western musical traditions.

Note: *Credit may not be obtained for both Music 3017/Folklore 3200 and the former Folklore 2430.*

**3018 Jazz and Blues: The Roots of Popular Music (3 cr. hrs.)** (same as Folklore 3618) is an overview of blues and jazz as traditional musical forms. Lectures and listening will illustrate the development of regional music cultures and generic styles. To better understand the shift of blues and jazz from regional to global performance contexts, the course will examine the effects of changing transmissional media, from predominantly sensory media through contemporary media technologies. A term paper concerning musical style will entail library research and aural analysis.

**3060 Voice Literature and Performance Practice (3 cr. hrs.)** is a survey of selected solo vocal repertoire from the Renaissance to the present day. Stylistic development and performance practices will be emphasized.

Prerequisite: Music 140B in voice or permission of the instructor.

**3070 Piano Literature and Performance Practice (3 cr. hrs.)** is a survey of piano repertoire from the Baroque era to the present day. Stylistic

development and performance practices will be emphasized.  
Prerequisite: Music 140B in piano or permission of the instructor.

**4001 The First Viennese School** - inactive course.

**4002 Studies in Baroque Music (3 cr. hrs.)** is an examination of aspects of musical style and performance practices in the baroque period through the study of selected topics and specific musical examples. The course includes reading assignments, listening, score reading, and taking part in class demonstrations.  
Prerequisite: Music 1003.

**4003 Special Topics in Music History (1 cr. hr. per semester. maximum: 3 cr. hrs.)** will be announced by the School of Music.

**4004 Special Topics in Music History (2 cr. hrs. per semester maximum: 4 cr. hrs.)** will be announced by the School of Music.

**4005 Special Topics in Music History (3 cr. hrs. per semester maximum: 6 cr. hrs.)** will be announced by the School of Music.

**4094 Introduction to Music Research (3 cr. hrs.)** is a study of bibliography

and various aspects of research methods appropriate to the study of music. Students will participate in group and individual projects, and give a seminar presentation in class.

Prerequisite: Music 2003.

**4095 Graduating Essay (3 cr. hrs.)** is directed study which will result in the production of an original paper dealing with a topic of historical musical significance. This course is restricted to History and Literature of Music majors.

Prerequisite: Music 4094.

**4440 Music and Culture (3 cr. hrs.)** (cross-listed with Folklore 4440 and Anthropology 4440.) examines traditional music as an aspect of human behaviour in Western and non-European cultures. Examination of the functions and uses of music; folk- popular-art music distinctions; and the relation of style to content. Outside reading, class exercises and individual reports will be required.

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FACULTY OF SCIENCE

# FACULTY OF SCIENCE

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Colbo, M., B.Sc., M.Sc. *Alberta*, Ph.D. *Queensland*

Collins, M.A.J., B.Sc., Cert. Ed., M.Sc. *Southampton*, B.Ed., M.Ed.

*Memorial*, Ph.D. *Keele*; Winner of the President's Award for

Distinguished Teaching, 1996-1997; Associate Vice-President (Academic) (on leave)

Finney-Crawley, J.R., B.Sc. *Wales*, M.Sc., Ph.D. *London*; Winner of President's Award for Distinguished Teaching 2000-2001

Gow, J.A., B.Sc. *Guelph*, M.Sc. *Western Ontario*, Ph.D. *McGill*

Innes, D., B.Sc. *British Columbia*, M.Sc. *Dalhousie*, Ph.D. *S.U.N.Y.*

**Associate Professors**

Dickinson, A.B., B.Sc. *London*, B.Ed., M.Sc. *Memorial*, M.A.(Ed.) *Leeds*, M.Phil., Ph.D. *Cambridge*; Operational Director CCIFTD (on leave)

Dunbrack, R., B.A. *New Brunswick*, Ph.D. *Simon Fraser*

Emerson, I.P., B.Sc. *Toronto*, B.Ed., M.Sc. *Memorial*; First Year Coordinator

Fahraeus-Van Ree, G., M.E., B.Sc., M.Sc., Ph.D. *State University of Utrecht, The Netherlands*

Gardner, G.A., B.Sc. *Guelph*, M.Sc., Ph.D. *British Columbia*; Associate Dean of Science (on leave)

Hermanutz, L., B.Sc. *Guelph*, M.Sc. *Windsor*, Ph.D. *Western Ontario*; Cross appointment with Botanical Garden

Hooper, R.G., B.Sc. *Victoria*, Ph.D. *Portsmouth*; Curator, Phycological Herbarium; Director, Bonne Bay Marine Station; Cross appointment to Sir Wilfred Grenfell College

Jones, I.L. B.Sc. *Carleton*, M.Sc. *Toronto*, Ph.D. *Queen's*

Knoechel, R., B.Sc., *Cornell*, Ph.D. *McGill*

Kao, M., B.Sc. *Taiwan*, M.Sc., Ph.D. *Memorial*

McGowan, R.A., B.Sc.(Hons.) *Brock*, Ph.D. *SUNY/AB*; Joint

appointment with Department of Biochemistry

Miller, E.H., B.Sc. *Alberta*, M.Sc. *Canterbury*, Ph.D. *Dalhousie*

Murrin, F., B.Sc. *Memorial*, M.Sc. *Acadia*, Ph.D. *Queen's*

Pickavance, J.R., B.Sc., Ph.D. *Liverpool*

Scott, P.J., B.Sc. *Alberta*, Ph.D. *Memorial*; Curator, Agnes Marion

Ayre Herbarium

Snelgrove, P., B.Sc.(Hons.) *Memorial*, M.Sc. *McGill*, Ph.D. *Woods*

*Hole*; Joint appointment with Ocean Sciences Centre

Staveley, B.E., B.Sc., M.Sc. *Guelph*, Ph.D. *Alberta*

**Assistant Professors**

Edinger, E., B.A. *California*, M.Sc., Ph.D. *McMaster*, Joint appointment with Department of Geography



Volkoff, H., B.Sc. *Pierre et Marie Curie University*, M.Sc. *University of Aix-Marseille III*, Ph.D. *Clemson University*; Joint appointment with Department of Biochemistry

#### Adjunct Professors

Anderson, M.R., B.Sc., M.Sc. *Larval*, Ph.D. *McGill*  
 Barker, D., B.Sc.(Hons.), M.Sc. *Memorial*, Ph.D. *Dalhousie*  
 Carscadden, J.E., B.Sc., M.Sc. *Waterloo*, Ph.D. *McGill*  
 Chen, Y., B.Agric.(Fish.Sci.) *Qingdao*, M.Sc., Ph.D. *Toronto*  
 Debnath, S., B.Sc.Ag.(Hons.), M.Sc.Ag. *Bangladesh Agric. Univ.*, Ph.D. *India Agric. Res. Inst.*  
 Dixon, P.L., B.Sc. *Memorial*, M.Sc. *Guelph*, Ph.D. *Edinburgh*  
 Gibson, R. John Gibson, B.S., M.A. *Trinity College, Dublin Univ.*, B.Sc., M.Sc. *Western Ontario*, Ph.D. *Waterloo*  
 Gregory, R.S., B.Sc.(Hons.) *Acadia*, M.Sc. *Trent*, Ph.D. *British Columbia*  
 Hicks, B., B.Sc.(Hons.), M.Sc. *Memorial*, Ph.D. *Univ. Edinburgh*  
 Kaunda-Arara, B., B.Sc. *Moi*, M.Sc. *Nairobi*, Ph.D. *Memorial*  
 McKenzie, D.B., B.S.A., M.Sc. *Manitoba*, Ph.D. *Texas A & M*  
 McLaren, B., B.Sc. *Toronto*, Ph.D. *Michigan Tech. Univ.*  
 Mehl, K., B.Sc. *Humbolt College*, M.Sc. *Texas A & M*, Ph.D. *Saskatchewan*  
 Methven, D.A., B.Sc. *Mt. Allison*, M.Sc., Ph.D. *Memorial*  
 Robertson, G.J., B.Sc. *Queens*, Ph.D. *Simon Fraser*  
 Ryall, K., B.Sc.(Hons.) *Queen's*, M.Sc., Ph.D. *Toronto*  
 Schaefer, J.A., B.Sc. *McGill*, M.Sc. *Manitoba*, Ph.D. *Saskatchewan*  
 Stenson, G.B., B.Sc. *Alberta*, Ph.D. *British Columbia*  
 Van Zyll de Jong, M.C., B.Sc. *Toronto*, M.Sc., Ph.D. *Hull*  
 Whitney, H.G., B.Sc. *McGill*, M.Sc. *Saskatchewan*, Ph.D. *Montréal*

#### Cross Appointments

Deibel, D., B.Sc. *Bucknett*, Ph.D. *Georgia*; University Research Fellow, Associate Professor (Research); Winner of the President's Award for Outstanding Research, 1990-1991; Cross appointment from Ocean Sciences Centre  
 Driedzic, W.R., B.Sc. *York*, M.Sc. *Toronto*, Ph.D. *British Columbia*; Cross appointment from Ocean Sciences Centre  
 Fletcher, G.S., B.Sc. *British Columbia*, Ph.D. *California*; Professor (Research); Cross appointment from Ocean Sciences Centre  
 Gamperl, A.K., B.Sc. (Hons.), M.Sc. *Guelph*, Ph.D. *Dalhousie*; Cross appointment from Ocean Sciences Centre  
 Montevicchi, W.A., B.A. *Northeastern*, M.Sc. *Tulane*, Ph.D. *Rutgers*; Cross appointment from Department of Psychology  
 Nicholls, K.W., B.Sc.(Hons.) *Univ. College of Wales*, Ph.D. *British Columbia*; Cross appointment from Botanical Garden  
 Patel, J.T., B.Sc., M.Sc. *Majaraja Sayajirao*, M.S. *Texas Women's*, Ph.D. *S.U.N.Y. (Buffalo)*; Cross appointment from Fisheries and Marine Institute  
 Rivkin, R.B., B.Sc., M.Sc. *City College, New York*, Ph.D. *Rhode Island*; Cross appointment from Ocean Sciences Centre  
 Rose, G.A., B.Sc. *Guelph*, M.Sc. *Laurentian*, Ph.D. *McGill*; Cross appointment from Fisheries and Marine Institute  
 Schneider, D.C., B.Sc. *Duke*, Ph.D. *SUNY, Stony Brook*; Associate Dean (Research); Professor; Cross appointment from Ocean Sciences Centre; Cross appointment with Department of Psychology  
 Shahidi, F., B.Sc. *Shiraz*, Ph.D. *McGill*; Cross appointment from Department of Biochemistry  
 Thompson, R.J., B.Sc. *Bristol*, Ph.D. *Leicester*; Professor (Research); Cross appointment from Ocean Sciences Centre  
 Wroblewski, J.S., B.Sc. *Illinois*, M.Sc., Ph.D. *Florida State*; Professor (Research); Cross appointment from Ocean Sciences Centre

#### Administrative Staff Officer

Vacant

#### Supervisor of Laboratories

Collins, G.

## DEPARTMENT OF CHEMISTRY

#### Head

Davis, R.W., B.Sc. *Memorial*, Ph.D. *British Columbia*; Associate Professor

#### Professor Emeritus

Anderson, H.J., M.Sc. *Manitoba*, Ph.D. *Northwestern*, F.C.I.C.

#### Professors

Bodwell, G.J., B.Sc., M.Sc. *Victoria*, Dr.rer.nat. *Tech. Univ. Braunschweig*; Winner of the President's Award for Outstanding Research, 1998-1999; Winner of the Petro Canada Young

Innovator Award, 1999-2000

Georgiou, P.E., B.Sc.(Hons.) *Witwatersrand*, Ph.D. *McGill*, F.C.I.C.

Helleur, R.J., B.Sc. *Concordia*, M.Sc. *McGill*, Ph.D. *Queen's*; Cross appointment with Ocean Sciences Centre

Jablonski, C.R., B.Sc. *Mass.*, Ph.D. *Calgary*, F.C.I.C.; Winner of the President's Award for Outstanding Research, 1984-1985; Interim Dean of Graduate Studies

Lucas, C.R., B.Sc., M.Sc. *Acadia*, D.Phil. *Oxon*, F.C.I.C.; Dean of Science

Mezey, P.G., M.Sc., M.Sc., Ph.D. *Budapest*, D. Sc. *Saskatchewan*; Canada Research Chair in Scientific Modelling and Simulation

Pickup, P.G., B.A., D.Phil. *Oxon*; Deputy Head (Graduate Studies and Research); University Research Professor, Awarded 2005

Poirier, R.A., B.Sc., M.Sc. *Laurentian*, Ph.D. *Toronto*, F.C.I.C.; Winner of the President's Award for Outstanding Research, 1986-1987

Thompson, L.K., B.Sc., Ph.D. *Manchester*, F.C.I.C.; University Research Professor, Awarded 1995

#### Associate Professors

Flinn, C.G., B.Sc., M.Sc., Ph.D. *Dalhousie*

Mackey, M.D., B.Sc. *British Columbia*, M.Sc., Ph.D. *Guelph*

#### Assistant Professors

Bottaro, C.S., B.Sc.(Hons.) *St. Mary's*, Ph.D. *Dalhousie*

Fridgen, T.D., B.Sc.(Hons.) *Trent*, B.Ed., Ph.D. *Queen's*

Kerton, F.M., B.Sc.(Hons.) *Univ of Kent*, D.Phil. *Univ of Sussex*

Kozak, C.M., B.Sc.(Hons.) *McMaster*, Ph.D. *UBC*

Merschrod, E., A.B. *Bryn Mawr Coll.*, M.S., Ph.D. *Cornell*

Pansare, S.V., B.Sc., M.Sc., *Univ. Pune (India)*, Ph.D. *Alberta*

Thompson, D.W., B.Sc.(Hons.), M.Sc. *Queen's*, Ph.D. *York*

Zhao, Y., B.S., M.S. *Dalian*, Ph.D. *Alberta*

#### Assistant Professor (term)

Hattenhauer, K.M., B.Sc. *Winnipeg*, Ph.D. *Manitoba*

#### Cross-Appointment

Parrish, C.C., B.Sc. *Wales*, Ph.D. *Dalhousie*; Cross appointment from Ocean Sciences Centre

#### Adjunct Professor

Miller, D., B.Sc., M.Sc. *Memorial*

#### Administrative Officer

Corbett, L.

#### Director, CREAT Network

Miller, D., B.Sc., M.Sc. *Memorial*

#### Chemistry Stores Supervisor

Ballard, S.

#### Undergraduate Laboratory Supervisor

Gulliver, G.

## DEPARTMENT OF COMPUTER SCIENCE

#### Head

Banzhaf, W., Dipl. Phys. *Ludwig-Maximilian*, Munich, Dr.rer.nat. *Friedericiana*, Karlsruhe; Professor

#### Professors

Bartha, M., M.Sc., Ph.D. *József Attila University, Hungary*

Gillard, P., B.Sc., M.Sc., Ph.D. *Memorial*

Lu, S., B.Eng. *Peking*, M.Sc., Ph.D. *Waterloo*

Mimimis, G., Dipl. Greek Center of Productivity, B.Sc. *Univ. of Ioannina (Greece)*, M.Sc., Ph.D. *McGill*; Chair, Computational Science Program

Tang, J., M.Sc. *Iowa*, Ph.D. *Penn. State*

Vidyasankar, K., M.Tech. *I.I.T. Kanpur*, Ph.D. *Waterloo*

Wang, C.A., B.A. *Peking*, M.Sc., Ph.D. *Alberta*

Zuberek, W., M.Sc., Ph.D., D.Sc. *Warsaw Tech.*

#### Associate Professors

Brown, E., B.Sc.(Hons.), *Memorial*, M.Sc. *U. of T.*, Ph.D. *Toronto*, LL.B. *Victoria*

Byrne, R., B.Sc.(Hons.), B.Eng. *Memorial*, M.Sc., Ph.D. *Victoria*

Deb, A., M.Tech. *Calcutta*, Ph.D. *Iowa*

Fiech, A., Dipl. Inf. *Dortmund*, Ph.D. *Kansas State*

Shieh, J., B.Sc. *Beijing*, M.Sc., Ph.D. *Simon Fraser*

Wareham, T., B.Sc.(Hons.), B.A., M.Sc. *Memorial*, Ph.D. *Victoria*

Yu, G., M.Sc. *Northeastern*, Ph.D. *London*

**Assistant Professors**

Bungay, S., B.Sc., M.Sc. *Memorial*, Ph.D. *Guelph*  
 Chen, Y.P., B.Sc. *Beijing*, Ph.D. *Simon Fraser*  
 Mata-Montero, M., B.Sc. *Costa Rica*, M.Sc. *Illinois*, Ph.D. *Victoria*  
 Vardy, A., B.Eng. *Memorial*, M.Sc. *Sussex*, Ph.D. *Carleton*; Joint  
 appointment with Electrical and Computer Engineering, Faculty  
 of Engineering and Applied Science

**Lecturers**

Batten, D.L., B.Sc.(Hons.) *Memorial*, M.Sc. *Queen's*  
 Gupta, R., B.A. *Agra Univ.*, B.A. *Memorial*, M.S. *Georgia Tech.*  
 Zuberek, M., B.Eng., M.Sc. *Warsaw Tech.*

**Cross-Appointments**

Norvell, T.S., B.Sc.(Hons.) *Dalhousie*, M.Sc., Ph.D. *Toronto*; Cross  
 appointment with Faculty of Engineering and Applied Science  
 Parsons, J., B.Comm.(Hons.) *Memorial*, Ph.D. *British Columbia*;  
 Cross appointment with Faculty of Business Administration  
 Peters, D.K., B.Eng. *Memorial*, M.Eng., Ph.D. *McMaster*, P.Eng.;  
 Cross appointment with Faculty of Engineering and Applied  
 Science

**Systems Manager**

Rayment, M., B.Sc. *Memorial*, MS *M.I.U.*

**Systems Personnel**

Boland, T., B.Sc. *Memorial*, AITD, ITI  
 Hart, D., B.Sc., Dipl. IT *Memorial*  
 Price, P., B.Sc. *Memorial*  
 White, N., B.Sc. *Memorial*, MS *M.I.U.*  
 Wissink, M., B.Sc. *New Brunswick*  
 Young, J., B.Sc. *Memorial*

**Laboratory Instructor**

Johnstone, S., B.Sc. *Memorial*

**Instructional Assistants**

Anthony, S., B.Sc. *Memorial*  
 Milley, C., B.Sc. *Memorial*  
 Verbree-Barnes, I., B.Sc. *Memorial*

**Computer Industry Internship Coordinator**

Vacant

**Administrative Staff Specialist**

Boone, E.

**DEPARTMENT OF EARTH SCIENCES****Head**

Hanchar, J.H., B.S. *Memphis*, M.S. *Vanderbilt*, Ph.D. *Rensselaer*  
*Polytechnic Institute*

**Professores Emeriti**

Hodych, J.P., M.A., Ph.D. *Toronto*  
 Longrich, H., B.Sc. *Millikin*, Ph.D. *Indiana*  
 Rochester, M.G., B.A., M.A. *Toronto*, Ph.D. *Utah*, F.R.S.C.;  
 University Research Professor, Awarded 1986

**Honorary Research Professor**

Williams, H., M.Sc. *Memorial*, Ph.D. *Toronto*; F.R.S.C.

**University Research Professor**

Hall, J., B.A. *Oxon*, DIC *London*, Ph.D. *Glasgow*, P.Geo.;  
 University Research Professor, Awarded 2003

**Professors**

Aksu, A.E., B.Sc. *Ege*, M.Sc., Ph.D. *Dalhousie*  
 Burden, E.T., B.Sc., M.Sc. *Toronto*, Ph.D. *Calgary*, P.Geo.  
 Dunning, G.R., B.Sc., M.Sc. *Carleton*, Ph.D. *Memorial*; Winner of  
 the President's Award for Outstanding Research, 1994-1995  
 Gale, J.E., B.A.(Ed.), B.Sc. *Memorial*, M.Sc. *Western Ontario*,  
 M.Eng.Sci., Ph.D. *Berkeley*, P.Geo.; Winner of the President's  
 Award for Outstanding Research, 1985-1986  
 Hiscott, R.N., B.Sc. *Brock*, Ph.D. *McMaster*, P.Geo.  
 Indares, A., B.Sc. *Grenoble*, M.Sc., Ph.D. *Montreal*  
 Jenner, G.A., B.Sc., M.Sc. *Western Ontario*, Ph.D. *Tasmania*  
 Johansen, T., B.Sc., M.Sc., Ph.D. *Oslo*; Canada Research Chair  
 in Reservoir Engineering; Cross appointment with Faculty of  
 Engineering and Applied Science  
 Miller, H.G., B.Sc., M.Sc. *Memorial*, Ph.D. *British Columbia*,  
 P.Geo.  
 Myers, J.S., B.Sc.(Hons.), ARCS, DIC, Ph.D. *London*  
 Quinlan, G.M., B.Sc. *Toronto*, Ph.D. *Dalhousie*, P.Geo.  
 Rivers, C.J.S., B.Sc. *Belfast*, Ph.D. *Ottawa*

Slawinski, M.A., B.Sc., M.Sc., Ph.D. *Calgary*; Petro Canada Chair  
 in Applied Seismology  
 Sylvester, P.J., B.S. *Purdue*, Ph.D. *Washington*  
 Wilton, D.H.C., B.Sc. *Memorial*, M.Sc. *British Columbia*, Ph.D.  
*Memorial*, P.Geo.  
 Wright, J.A., B.A.Sc., M.Sc., Ph.D. *Toronto*, P.Geo.; Director,  
 Major Research Partnerships

**Associate Professors**

Azmy, K., B.Sc. *Ain Shams*, M.Sc. *Windsor*, Ph.D. *Ottawa*  
 Bording, R.P., B.S. *Missouri*, M.S. *Alabama*, Ph.D. *Tulsa*; Husky  
 Energy Chair in Oil and Gas Research  
 Calon, T.J., M.Sc., Ph.D. *Leiden*  
 Enachescu, M.E., M.Sc., Ph.D. *Bucharest*; Husky Energy Senior  
 Research Fellow in Exploration Geophysics  
 Hurich, C., B.Sc., M.Sc., Ph.D. *Wyoming*  
 Leitch, A., B.Sc., Ph.D. *Australian National*, NSERC WFA  
 Mason, R.A., B.Sc. *London*, Ph.D. *Aberdeen*, P.Geo.  
 Meyer, R., B.A. *Lawrence*, M.Sc. *Michigan State*, Ph.D. *Calgary*  
 Wilson, M.R., B.Sc.(Hons.), Ph.D. *Sask.*

**Assistant Professors**

Bóna, A., B.Sc.(Hons) *Czech Technical University*, Ph.D. *Calgary*  
 Jamieson, R., B.Sc., M.Sc. *Memorial*, Ph.D. *McMaster*  
 McIlroy, D., B.Sc. *Manchester*, D.Phil. *Oxford*; Canada Research  
 Chair in Petroleum Geoscience and Geotechnology

**Visiting Assistant Professor**

Bucataru, I., M.Sc., Ph.D. "AC.I. Cuza" of Iasi

**Adjunct Professors**

Cabri, L.J., B.Sc.(Hons.) *Witwatersrand*, M.Sc.(Appl.), Ph.D.  
*McGill*; Emeritus Research Scientist (CANMET, NRC)  
 Pulham, A.J., B.Sc.(Hons.) *Liverpool*, Ph.D. *Swansea*  
 Scott, W.J., B.A.Sc., M.A. *Toronto*, Ph.D. *McGill*, P.Eng., P.Geo.,  
 FGAC

**Post-Doctoral Fellow**

Welford, J.K., B.Sc. *McGill*, M.Sc., Ph.D. *British Columbia*

**Undergraduate Officer**

Pätzold, R., B.Sc., M.Sc. *Memorial*

**Research Computing Specialist**

Smith, D., B.Sc.(Hons.)

**Laboratory Instructor**

Hicks, R., M.Sc. *Dalhousie*

**Administrative Officer**

Penney, M., B.Comm., C.M.A., M.B.A. *Memorial*

**DEPARTMENT OF MATHEMATICS AND STATISTICS****Head**

Radford, C., B.Sc., Ph.D. *Sydney*

**Professor Emeritus**

Shawyer, B.L.R., B.Sc., Ph.D. *St. Andrews*, C.Math., F.I.M.A.(U.K.)

**MATHEMATICS****Professors**

Bahturin, Y., D.Sc., Ph.D. *Moscow*, University Research Professor,  
 Awarded 2002  
 Bass, D.W., B.Sc. *Hull*, M.Phil, P.G.C.E. *London*, Ph.D. *Warwick*;  
 Joint appointment to Faculty of Engineering and Applied  
 Science  
 Booth, P.I., B.Sc., M.Sc., Ph.D. *Hull*; Winner of the Dean of  
 Science Distinguished Scholar Medal, 1996  
 Brunner, H., M.A., Ph.D. E.T.H. *Zurich*; University Research  
 Professor, Awarded 1994  
 Goodaire, E.G., B.Sc. *Toronto*, Ph.D. *British Columbia*  
 Heath, P.R., B.Sc., Ph.D. *Hull*, DBS *Durham*, MTS *Queen's*  
*Ontario*; Petro-Canada Young Innovators Award, 2000  
 Parmenter, M.M., B.Sc. *Toronto*, Ph.D. *Alberta*; Motivational  
 Teaching Award, 2003  
 Summers, D., B.Sc., Ph.D. *London*, F.I.M.A. (U.K.); University  
 Research Professor, Awarded 2000  
 Watson, B., B.A., M.A., Ph.D. *Western Ontario*  
 Zhao, X., B.S., M.S. *Northwest*, Ph.D. *Academia Sinica*

**Associate Professors**

Foster, A., B.Sc., Ph.D. *Dalhousie*, M.Math. *Waterloo*; Motivational Teaching Award, 2001  
 Mantyka, S., B.A., M.B.A. *Sask.*, M.Math., Ph.D. *Waterloo*  
 Oleson, M., B.Sc. *Manitoba*, M.Sc., Ph.D. *Waterloo* (on leave)  
 Pike, D., B.Math. *Waterloo*, MAM, Ph.D. *Auburn*, FTICA  
 Rees, R.S., B.Sc., B.Med.Sc., Ph.D. *Queen's*, FTICA; Hall Medal, 1999  
 Rideout, D., B.A.(Ed.), B.Sc. *Memorial*, Ph.D. *McGill*; Motivational Teaching Award, 2000  
 Shalaby, N.A.I., M.A. *York*, Ph.D. *McMaster*  
 Suvak, J.A., B.S. *St. Martin's College*, M.S., Ph.D. *Arizona*  
 Zhou, Y., B.Sc. *Hunan Normal*, M.Sc. *Beijing Normal*, Ph.D. *British Columbia*  
 Zou, X., B.Sc. *Zhongshan (Sun Yat-Sen)*, M.Sc. *Hunan*, Ph.D. *York*; Petro-Canada Young Innovators Award, 2002

**Assistant Professors**

Booth, I., B.Sc. *Memorial*, M.Sc., Ph.D. *Waterloo*; Cross appointment to Department of Physics and Physical Oceanography  
 Dyer, T.D., B.Sc.(Hon.) *Memorial*, M.Sc., Ph.D. *Simon Fraser*  
 Kondratieva, M., M.Sc. *Moscow Inst. of Electronics & Math*, Ph.D. *Tomsk State*  
 Ou, C.-H., B.A. *Peking*, Ph.D. *Hong Kong*  
 Sadvov, S., M.Sc. *Moscow Inst. of Electronics and Math*, Ph.D. *Keldysh Inst. for Applied Math*  
 Xiao, J., M.Sc. *Hunan*, Ph.D. *Peking*  
 Yuan, Y., B.Sc. *Wuhan*, M.Sc. *Central South Univ. of Tech.*, Ph.D. *Western Ontario*; UFA 2004

**Laboratory Instructor**

O'Reilly, G., B.Sc. *Memorial*

**STATISTICS****Professors**

Lee, C.C., B.Sc. *Cheng-Kung*, M.Sc., Ph.D. *Oregon State*; Deputy Head  
 Sutradhar, B.C., B.Sc. *Dacca*, M.Sc. *Dacca and Western Ontario*, Ph.D. *Western Ontario*; University Research Professor, Awarded 2004

**Associate Professors**

Oyet, A., B.Sc., M.Sc. *Fed. U. of Tech.*, Ph.D. *Alberta*; Graduate Officer  
 Peng, P., B.Sc., M.Sc. *Lanzhou*, Ph.D. *Newcastle*  
 Wang, H., B.Sc. *Beijing Normal*, Ph.D. *Regina*

**Assistant Professors**

Fan, Z., B.Sc., M.Sc. *Shandong*, Ph.D. *Gottingen*  
 Loredo-Osti, J.C., B.Sc., M.Sc. *Universidad Autonoma*, Ph.D. *Dalhousie*  
 Sneddon, G., B.Sc.(Hon.) *Acadia*, M.Sc., Ph.D. *Dalhousie*

**Adjunct Professor**

Cadigan, N., B.Sc., MAS *Memorial*, Ph.D. *Waterloo*

**Consultants for Master of Applied Statistics Program**

Bartholomew, L., B.Sc., M.A.S. *Memorial*; Newfoundland Statistical Agency  
 Cadigan, N., B.Sc., M.A.S. *Memorial*, Ph.D. *Waterloo*; Department of Fisheries and Oceans, St. John's  
 Lye, L.M., B.Sc.(Hons.) *Bolton Inst.*, Ph.D. *Manitoba*, P.Eng.; Faculty of Engineering and Applied Science, Memorial University of Newfoundland  
 Schneider, D.C., B.Sc. *Duke*, Ph.D. *SUNY, Stony Brook*; Ocean Sciences Centre, NICOS  
 Thompson, R.J., B.Sc. *Bristol*, Ph.D. *Leicester*; Ocean Sciences Centre, Logy Bay  
 Tsoa, E.Y., B.A. *Taiwan*, M.A., Ph.D. *Notre Dame*; Department of Economics, Memorial University of Newfoundland

**Undergraduate Officer**

Johnson, H., B.Sc. *Memorial*

**Administrative Staff Specialist**

English, R.

**DEPARTMENT OF PHYSICS AND PHYSICAL OCEANOGRAPHY****Head**

Whitehead, J.P., B.Sc. *St. Andrew's*, Ph.D. *Alberta*; Professor

**Professores Emeriti**

Cho, C.W., B.Sc. *Seoul*, M.A., Ph.D. *Toronto*  
 Clouter, M.J., M.Sc. *Memorial*, Ph.D. *Toronto*; University Research Professor, Awarded 2000  
 Gien, T.T., Lic. és Sc. *Saigon*, M.Sc., Ph.D. *Ohio*; University Research Professor, Awarded 2001  
 Reddy, S.P., M.Sc., D.Sc. *Andhra*, F. Inst. P. *London*, F.A.P.S.  
 Rochester, M.G., M.A. *Toronto*, Ph.D. *Utah*, FRSC; University Research Professor, Awarded 1986; Cross appointment from Department of Earth Sciences

**Honorary Research Professor**

Rich, N.H., B.Sc., M.S. *Maine*, Ph.D. *S. California*

**Professors**

de Young, B., B.Sc., M.Sc. *Memorial*, Ph.D. *British Columbia*; Appointed to Robert A. Bartlett Professorship in Oceanography; Winner of the President's Award for Outstanding Research, 1997-1998; Cross appointment with Ocean Sciences Centre  
 Lagowski, J.B., B.Sc. *Manitoba*, M.Sc., Ph.D. *Toronto*  
 Lewis, J.C., B.Sc., M.Sc. *Carleton*, Ph.D. *Toronto*  
 Morrow, M.R., B.Sc. *McMaster*, M.Sc., Ph.D. *British Columbia*  
 Plumer, M., B.Sc. *St. Francis Xavier*, M.Sc. *Dalhousie*, Ph.D. *Toronto*

**Associate Professors**

Afanassiev, I., Ph.D. *P.P. Shirshov Institute of Oceanology, Russian Acad.*, M.Sc. *Moscow Physical-Technical University*  
 Quirion, G., B.Sc., M.Sc., Ph.D. *Sherbrooke*  
 Zedel, L., B.Sc., M.Sc. *Victoria*, Ph.D. *British Columbia*; Petro-Canada Young Innovators Award, Awarded 2001 (on leave)

**Assistant Professors**

Andrews, G.T., B.Sc., M.Sc., Ph.D. *Memorial*  
 Beaulieu, L., B.Sc. *University of Ottawa*, M.Sc., Ph.D. *Dalhousie*  
 Bourgault, D., M.Sc. *Quebec at Rimouski*, Ph.D. *McGill*  
 Chen, Q., B.Sc. *Shanghai Jiao Tong University China*, M.Sc., Ph.D. *Shanghai Institute of Optics and Fine Mechanics, China* (CRC Photonics)  
 Curnoe, S.H., B.Sc. *Toronto*, Ph.D. *British Columbia* (NSERC UFA); Winner of the President's Award for Outstanding Research, 2005-2006  
 Demirov, E., M.Sc., Ph.D. *University of St. Petersburg, Russia*  
 Poduska, K., B.A. *Carleton College*, M.S., Ph.D. *Cornell*  
 Yethiraj, A., B.Sc. *Bombay (St. Xavier's College)*, M.Sc. *Houston*, Ph.D. *Simon Fraser*

**Adjunct Professors**

Davidson, F., B.Sc. *Ottawa*, M.Sc., Ph.D. *Memorial*  
 DeBell, K., B.Sc. *King's College, University of London*, M.Sc. *Westfield College, University of London*, Ph.D. *University of London*  
 Han, G., B.S., M.S., Ph.D. *Hohai University*  
 Mroz, B., M.Sc., Ph.D. *Mickiewicz University*  
 Whitmore, M.D., B.Sc., M.Sc., Ph.D. *McMaster*

**Cross-Appointments**

Booth, I., B.Sc.(Hons.) *Memorial*, M.Sc., Ph.D. *University of Waterloo*; Cross appointment from Mathematics and Statistics  
 Booth, V., B.Sc. *Victoria*, M.Sc. *Waterloo*, Ph.D. *Toronto*  
 Mezey, P., M.Sc., Ph.D. *University of Budapest*, D.Sc. *University of Saskatchewan*; Canada Research Chair; Cross appointment from Chemistry  
 Nag, K., B.Sc.(Hons.) *University of Calcutta*, M.Sc., Ph.D. *Memorial*; Cross appointment from Biochemistry  
 Wroblewski, J.S., B.Sc. *Illinois*, M.Sc., Ph.D. *Florida State*; Cross appointment from Ocean Sciences Centre

**Administrative Officer**

Corbett, D.

**Laboratory Co-ordinator**

Deacon, C.G., Ph.D. *Birmingham*, MBA *Memorial*

**Cryogenics Officer**

Holly, W.

**DEPARTMENT OF PSYCHOLOGY****Interim Head**

Martin, G.M., B.Sc.(Hons.), M.Sc. *Memorial*, Ph.D. *Australian National University*; Professor

**Honorary Research Professors**

Evans, J.H., B.A., Ph.D. *Wales*; Associate Professor  
Kozma, A., M.A., Ph.D. *Western Ontario*

**Professors**

Adamec, R.E., B.A. *Middlebury*, M.A., Ph.D. *McGill*; University Research Professor, Awarded 1993; Cross appointment with Faculty of Medicine  
Adams, R.J., B.A. *Concordia*, Ph.D. *McMaster*; Cross appointment with Faculty of Medicine  
Button, C.M., B.Sc., M.Sc. *Memorial*, Ph.D. *Rhode Island*  
Courage, M.L., B.A. *Memorial*, M.Sc. *Alberta*, Ph.D. *Memorial*; Cross appointment with Faculty of Medicine  
Grant, V.L., B.A., M.A. *Toronto*, Ph.D. *Memorial*  
Hannah, T.E., B.A., M.A. *Carleton*, Ph.D. *State University of New York at Stony Brook*  
Harley, C.W., B.S. *San Francisco State*, M.S., Ph.D. *Oregon*; Cross appointment with Faculty of Medicine  
McKim, W.A., B.A. *Memorial*, M.A. *Toronto*, Ph.D. *Western Ontario*  
Malsbury, C., B.A. *Northwestern*, M.A., Ph.D. *McGill*; Cross appointment with Faculty of Medicine  
Montevicchi, W.A., B.A. *Northeastern*, M.Sc. *Tulane*, Ph.D. *Rutgers*; Cross appointments to Ocean Sciences Centre and Department of Biology; University Research Professor, Awarded 2005  
Penney, C., B.Sc.(Hons.) *McGill*, M.A., Ph.D. *Toronto*  
Peterson, C., B.S. *Washington*, Ph.D. *Minnesota*  
Rabinowitz, F.M., B.A., M.S. *Rensselaer*, Ph.D. *Iowa*  
Sherrick, M.F., B.A., M.A., Ph.D. *Cincinnati*; Winner of the President's Award for Distinguished Teaching, 1992-1993  
Storey, A.E., B.Sc., M.A. *Manitoba*, Ph.D. *Rutgers*  
Walker, Lilly J. Shubert, B.A. *Jamestown College*, M.A., Ph.D. *University of North Dakota*; Dean, Student Affairs and Services

**Associate Professors**

Anderson, R.E., B.A. *Wisconsin*, Ph.D. *California*  
Andrews, E.A., B.A., B.Sc., M.Sc. *Memorial*  
Arlett, C., B.Sc. *Leicester*, M.A., Ph.D. *British Columbia*  
Gaulton, R.S., B.A., B.A.(Ed.) *Memorial*; Co-ordinator, First Year  
Gosse, V., B.A., M.Ed. *Memorial*, M.Sc. *Memorial*  
Grant, M., B.A., M.A. *Toronto*  
Maddigan, R.I., B.A.(Hons.), M.Sc. *Memorial*  
Penney, R., B.A.(Hons.) *Memorial*, M.A., Ph.D. *Michigan State*, M.F.T. *Hahnemann*; Cross appointment to Counselling Centre  
Skinner, D.M., B.Sc.(Hons.) *Memorial*, Ph.D. *Toronto*  
Strawbridge, J., B.A., M.A. *Carleton*, Ph.D. *Queen's*; Director of Faculty Relations

**Assistant Professors**

Fowler, K.F., B.Sc.(Hons.), Ph.D. *Memorial*  
Hadden, K., B.A.(Hons.) *York*, M.A., Ph.D. *Saskatchewan*

Hannah, E.R., B.Sc. *Buenos Aires*, M.A. *SUNY at Stony Brook*  
Snook, B., B.A. *Memorial*, M.Sc., Ph.D. *Liverpool*  
Walsh, C.J., B.Sc.(Hons.) *Memorial*, M.A. *Toronto*, Ph.D. *Memorial*

**Adjunct Professors**

Garthe, S., B.Sc. *Hamburg*, M.Sc., Ph.D. *Kiel*  
Gilchrist, H.G., B.Sc.(Hons.) *Trent*, Ph.D. *British Columbia*  
Koen-Alonso, M., Ph.D. *Buenos Aires*  
Sjare, B.L., B.Sc.(Hons.) *Alberta*, M.Sc. *McGill*, Ph.D. *Alberta*

**Cross Appointments**

Canning, P.M., B.A.(Hons.) *UPEI*, M.A., Ph.D. *Univ. of Windsor*; Cross appointment from Faculty of Education  
Corbett, D., B.A. *Dalhousie*, M.Sc. *Memorial*, Ph.D. *Concordia*; Cross appointment from Faculty of Medicine  
Doyle, M., B.Sc.(Hons.) *Memorial*, M.Ed., Ed.D. *Toronto*; Cross appointment from Counselling Centre  
He, P., B.Sc. *Zhejiang Fisheries College, Zhejiang, China*, Ph.D. *Aberdeen*; Cross appointment from Fisheries and Marine Institute  
Jones, I.L., B.Sc.(Hons.) *Carleton*, M.Sc. *Toronto*, Ph.D. *Queen's*; Cross appointment from Ocean Sciences Centre  
Miller, E.H., B.Sc.(Hons.) *Alberta*, M.Sc. *Canterbury University (New Zealand)*, Ph.D. *Dalhousie*; Cross appointment from Department of Biology  
Murray, P.M., B.Sc.(Hons.) *Ulster*, Ph.D. *Stirling*; Cross appointment from Faculty of Medicine  
Schneider, D.C., B.S. *Duke*, Ph.D. *SUNY at Stony Brook*; Cross appointment from Ocean Sciences Centre

**Administrative Staff Specialist**

Howard, M., Dip. Bus. Admin., *Memorial*

**Laboratory Instructors**

Brown, A., B.A. (Hons.) *Memorial*  
Milway, S., B.A. *Concordia*

**Instructional Assistant**

Gaborko, L., B.Sc. *Trent*

**Research Computing Specialist**

Earle, A., B.Sc. *Memorial*

**SCIENCE 1150/1151****Associate Professor**

Smith, F.R., B.Sc., M.Sc. *Memorial*; Co-ordinator

**Laboratory Instructor**

Huelin, S., B.Sc., M.Sc., B.Ed.

## 1 Research Units

### 1.1 Centre for Earth Resources Research (CERR)

**Director**

Hanchar, J.H., B.S. *Memphis*, M.S. *Vanderbilt*, Ph.D. *Rensselaer Polytechnic Institute*

#### 1.1.1 Research Group

The Centre draws on the research expertise of faculty and research staff members in the Department of Earth Sciences as well as other specialists inside and external to the University. For a complete listing of faculty, see Earth Sciences entry.

#### 1.1.2 Scope and Objectives

The CERR was established in 1983 to provide for the co-ordination and promotion of earth resources research and associated work related to the origin, discovery, development, exploitation, and environmental aspects of earth resources.

The Centre promotes, initiates, and co-ordinates research within the earth resources disciplines on the national and international scenes. Researchers interact, when appropriate, with the industrial and government sectors and introduce other organizations to the potential benefits of further research and development in earth resources.

The special facilities of the Centre complement the development of graduate and undergraduate programs in earth sciences and related disciplines at Memorial University of Newfoundland. A further function of the Centre is to contribute to the training of people competent in solving earth resources problems and to encourage personnel exchanges with industry and government.

The Alexander Murray Building houses the Centre, and has laboratories for teaching and basic and applied research.

#### 1.1.3 Organization

The Centre is an integral part of the Department of Earth Sciences. The active research of faculty members contributes to programs in the Centre. Increasing collaboration is under way with government and industry in research projects that emphasize earth resources. The work of the Centre addresses problems and opportunities related to mineral resources, petroleum resources, exploration

technology, environmental geoscience, and generic research.

The Centre works closely with other local, national, and international research institutes. CERR hosts the geoscience component of the University's Oil and Gas Development Partnership.

## 1.2 Ocean Sciences Centre (OSC)

### Administration

Boyce, D., B.A., M.Sc. *Memorial*; Aquaculture Development Supervisor, Aquaculture Research and Development Facility

Devereaux, J.; Field and Laboratory Services Supervisor

Fleming, I.A., B.Sc. *Queen's Univ.*, M.Sc. *Simon Fraser Univ.*, Ph.D. *Univ. of Toronto*; Associate Professor and Director, Ocean Sciences Centre

Nichols, D., B.A., MMS. *Memorial*; Research Marketing Manager

Wheeler, D.; Staff Administrative Specialist, Finance

### Scientific Staff

Deibel, D.R., B.Sc. *Bucknell University, U.S.A.*, Ph.D. *University of Georgia, U.S.A.*; Professor; Cross appointment with Department of Biology

Driedzic, W.R., B.Sc. *York, M.Sc. Toronto*, Ph.D. *British Columbia*; Professor; Tier I Canada Research Chair in Marine Bioscience; Cross appointments with Departments of Chemistry and Biochemistry

Gamperl, A.K., B.Sc., M.Sc. *Guelph*, Ph.D. *Dalhousie*; Associate Professor; Cross appointment with Department of Biology

Mercier, A., B.Sc. *Université de Sherbrooke*, M.Sc., Ph.D. *Université du Québec à Rimouski*; Assistant Professor

Parrish, C.C., B.Sc. *Wales*, Ph.D. *Dalhousie*; Winner of the President's Award for Outstanding Research, 1995-1996; Professor

Rivkin, R.B., B.Sc., M.Sc. *City College, New York*, Ph.D. *Rhode Island*; Professor; Cross appointment with Department of Biology

Schneider, D.C., B.Sc. *Duke*, Ph.D. *SUNY, Stony Brook*; Professor; Associate Dean (Research), Faculty of Science; Cross appointments with Departments of Biology and Psychology

Snelgrove, P.V.R., B.Sc. *Memorial*, M.Sc. *McGill*, Ph.D. *Woods Hole*; Associate Professor; Tier 2 Canada Research Chair in Boreal and Cold Ocean Systems; Cross appointment with Department of Chemistry; Joint appointment with Department of Biology

Thompson, R.J., B.Sc. *Bristol*, Ph.D. *Leicester*; Professor (Research); Cross appointment with Department of Biology

Wroblewski, J.S., B.Sc. *Illinois*, M.Sc., Ph.D. *Florida State*; Professor (Research); Cross appointment with Department of Biology

### Professores Emeriti

Burton, D., B.Sc. *Wales*, Ph.D. *London*; Biology

Fletcher, G.L., B.Sc. *British Columbia*, Ph.D. *California*

Khan, R.A., B.SA, M.Sc., Ph.D., *Toronto*; Biology

### Adjunct Professors

Afonso, L., B.Sc. *Brazil*, M.Sc. *Fed. Univ. of Rio Grande do Sul, Brazil*, Ph.D. *Univ. of British Columbia*; NRC, Halifax

Anderson, J.T., B.Sc., M.Sc. *Guelph*, Ph.D. *British Columbia*; Department of Fisheries and Oceans

Cote, D., M.Sc. *Wilfrid Laurier Univ.*, Ph.D. *Univ. of Waterloo*; Terra Nova National Park

Dixon, B., B.Sc. *Wilfrid Laurier Univ.*, M.Sc. *Univ. of Guelph*, Ph.D. *Dalhousie Univ. of Waterloo*

Ewart, K., B.Sc. *Moncton*, Ph.D. *Memorial*; Associate Research Officer, National Research Council - Institute for Marine Biosciences, Halifax

Johnson, S.C., B.Sc. *Victoria*, M.Sc. *Dalhousie*, Ph.D. *Simon Fraser*; Associate Research Officer, National Research Council - Institute for Marine Biosciences, Halifax

Mansour, Atef, B.Sc., M.Sc., Ph.D. *Cario Univ.*; Research Scientist, Dept. of Fisheries and Oceans, St. John's, NL

McKenzie, C., B.Sc., Ph.D. *Texas A & M*; Department of Fisheries and Oceans

McKinley, S., B.Sc. *Guelph*, M.Sc. *York*, Ph.D. *Waterloo*; NSERC Industrial Chair and Canada Research Chair; Professor, Faculty of Agricultural Sciences, University of British Columbia

Morgan, J.M., B.Sc. *Mount Alison*, Ph.D. *Queen's*; Department of Fisheries and Oceans

Pepin, P., B.Sc. *McGill*, Ph.D. *Dalhousie*; Northwest Atlantic Fisheries Centre, Department of Fisheries and Oceans

Walsh, S., B.Sc., M.Sc. *Memorial*, Ph.D. *Univ. of Bergen, Norway*; Department of Fisheries and Oceans

### Cross-Appointed Faculty

Dr. M.P. Burton; Department of Biology

Dr. W. Montevecchi, Department of Psychology

Dr. F. Shahidi; Department of Biochemistry

Dr. H. Volkoff; Department of Biology

### Post-Doctoral Fellows

Adams, B., B.Sc. *St. Mary's Univ.*, M.Sc., Ph.D. *Dalhousie Univ.*

Hale, M., B.Sc., Ph.D. *Flinders University, Australia*

Koseki, Y., B.Sc. *Shinshu Univ.*, M.Sc., Ph.D. *Hokkaido Univ.*

Rideout, R.M., B.Sc., M.Sc. *Memorial*, Ph.D. *Univ. of New Brunswick*

Trela, P., M.Sc. *Gdansk University, Poland*, Ph.D. *Dalhousie*

### Research Associate

Puvanendran, V., B.Sc. *Sri Lanka*, Ph.D. *Memorial*

### Research Specialist

DuRand, M., Ph.D. *Massachusetts*

### Research Assistants

Jones, D., B.Sc. *Saskatchewan*

King, M.J., B.Sc. *Memorial*

Short, C., B.Sc. *Memorial*

The Ocean Sciences Centre (OSC) provides scientists at Memorial University of Newfoundland and other organizations with first-rate facilities for research in cold ocean sciences. In addition, the OSC supports quality graduate education in a broad range of marine science and related disciplines. Located on the most eastern coast of Canada the Centre lends itself to the shore-based study of cold ocean processes, and sub-arctic and arctic fauna and flora. Current research foci are aquaculture, biological and chemical oceanography, and fundamental principles of behaviour, biochemistry, and physiology that underlie the first two themes. The OSC is a key player in AquaNet, Canada's first federal Network of Centres of Excellence (NCE) devoted to aquaculture. The OSC is an AquaNet Core Facility, as well as its Administrative Centre.

Located at Logy Bay, 9.6 km from the main campus, the OSC has an excellent unpolluted sea water supply that is the lifeline of the centre. There are 35 laboratories (22 provided with running seawater) and facilities for microscopy, histochemistry, analytical chemistry, radioisotope counting, physiological work, and standard analyses for oceanography. Large holding areas permit scientists to maintain a

variety of marine organisms for long periods at ambient and controlled water temperatures. The Seal Research Facility offers research opportunities on North America's only population of captive harp seals. The Field Services Unit provides extensive resources for field studies including: year round SCUBA diving, small research vessels, a tank truck for the transportation of live specimens, and a wide-range of oceanographic and collecting equipment.

The Logy Bay complex includes machine, woodworking and electronics shops, computer resource personnel, and a multimedia classroom. Desktop computers are linked to the mainframe cluster on campus, with high-resolution printing and graphics, and an image analysis facility.

The Aquaculture Research and Development Facility provides state-of-the-art facilities designed to support research, training, pre-commercial production, and small-scale commercial trials, on alternative species for marine aquaculture. A critical component of the new facility is a sea water system designed to deliver high quality, temperature controlled, flow through and re-circulating water. There are areas for broodstock conditioning, hatchery and nursery operation, first-feeding, on-growing, and live food production. Under investigation are: Atlantic halibut, Atlantic cod, Atlantic salmon and smaller flounder species.

#### Research Themes

1. Aquaculture nutrition and production
2. Reproductive biology of finfish and molluscs
3. Development and behavioral ecology of larval and juvenile fish
4. Survival of marine organisms without oxygen
5. Antifreeze proteins and cold adaptation in fish
6. Biological production and the ecology of cold oceans
7. Transport and fate of lipids in cold ocean ecosystems
8. Physiology of feeding and digestion in marine invertebrates
9. Marine biotechnology
10. Fisheries oceanography
11. Quantitative biology and population interactions

## 2 Degree Regulations

### 2.1 Admission to the Department of Subject of Major

Admission to certain major programs within the Faculty is limited and competitive.

Admission to all major programs within the Faculty is upon formal application to the department of the subject of major after completion of the admission requirements.

Unless otherwise indicated by the Departmental Admission Regulations as published in the University Calendar under departmental regulations, students upon formal application by *Change of Academic Program Form*, are normally admitted to the department of major program upon successful completion of 30 credit hours which must include:

1. Six credit hours in English courses
2. Six credit hours in Mathematics courses
3. Six credit hours in courses from each of two Sciences other than Mathematics

Students seeking admission to departments with Departmental Admission Regulations as indicated above must apply for admission on the appropriate Departmental Application for Admission Form upon completion of the specified admission requirements.

### 2.2 Limited Enrolment Courses

Certain course offerings in the Faculty of Science will be identified as being Limited Enrolment Courses and will be clearly identified as such in the University Timetable. Students who have registered for a Limited Enrolment Course must confirm their registration either (1) by attending at least one of the first three hours of lecture in the course and the first meeting of any laboratory section of the course; or (2) by notifying the department in writing within the first five university working days of the semester. Students who do not confirm their registration may be dropped from the course on the recommendation of the Head of Department.

### 2.3 Regulations to Govern Supplementary Examinations in the Departments of Biochemistry, Computer Science, Mathematics and Statistics, and Physics and Physical Oceanography

1. Supplementary examinations will be allowed in certain of the Biochemistry, Computer Science, and Physics and Physical Oceanography courses, and all Mathematics and Statistics courses which have written final examinations. In each course, students will be informed as to the possibility of a supplementary examination during the first week of classes. This information will be provided in writing, as part of the evaluation scheme for the course.
2. Supplementary examinations will be similar in length and degree of difficulty as the original final examination.
3. Students who wish to write supplementary examinations must apply in writing to the department within one week of release of grades.
4. A student who has clear or conditional standing may write a supplementary examination in a course if the final grade obtained is 45-49F and if his or her term mark is at least 50%.
5. In order to pass the course, the student, must pass the supplementary examination. If the student passes the supplementary examination, then a new grade will be calculated using the same weighting scheme as used in the course, but with the result of the supplementary examination replacing that of the original final examination. Any additional course requirements, including a requirement to pass the laboratory component of a course, will continue to apply.
6. If the new course grade is higher than the original, it will replace the original grade on the student's transcript, subject to the condition that the final mark will not exceed the student's term mark. The student's transcript will indicate that the course result was earned as the result of a supplementary examination.
7. Supplementary examinations will be written no later than the first week of the semester immediately following the one in which the course was failed. Normally they will coincide with the writing of deferred examinations. Grades for supplementary examinations will

be submitted to the Office of the Registrar within one week following the commencement of classes for that semester.

8. A student may write a supplementary examination for any one registration in a course only once; if the course result following the supplementary examination is a fail then the course must be repeated in order to obtain credit.

## 2.4 Regulations for the General Degree of Bachelor of Science

1. For the General Degree of Bachelor of Science a candidate will be required to complete, subject to the following Regulations, 120 credit hours applicable to the degree which shall include:
  - a. Six credit hours in English courses
  - b. Six credit hours in Mathematics courses
  - c. Six credit hours in courses from each of two Sciences other than Mathematics
2.
  - a. Courses shall be chosen so that a candidate shall have completed an approved concentration of courses in one subject to be known as the candidate's Major. In selecting courses in their Major, candidates must comply with the Departmental Regulations approved by the Senate and printed in the Calendar. The Departmental Regulations shall require not fewer than 36 nor more than 45 credit hours in courses from the subject of the Major (including the courses in that subject completed at the first year level). (See also Notes 1. and 2.).
  - b. The subject of the candidate's major shall be that declared by the candidate on the appropriate admission form and approved by the department at the time of admission.
  - c. The 36 or more credit hours in courses from one subject referred to in a. above, may be chosen from the following subjects, and may include courses in that subject which were completed at first-year level: Biology (see Note 4.), Biochemistry (see Note 6.), Chemistry, Computer Science, Earth Sciences, Economics, Geography, Mathematics (except 1150, 1151) and Statistics, Physics, Psychology.
  - d. A candidate may change the subject of the Major during any Regular Registration Period provided he or she has first applied for and received acceptance by the department to which application is being made.
  - e. In those Departments which offer programs leading to both a degree of Bachelor of Arts and a degree of Bachelor of Science, students are free to choose the degree program they wish to follow and may change from one to the other; however, they may not obtain both degrees in the same Major subject at this University. Students who are concurrently completing the Bachelor of Commerce (Co-operative) degree should refer to the entry Joint Degrees of Bachelor of Science (Computer Science) and Bachelor of Commerce (Co-operative) immediately following these regulations.
3. Further courses may be chosen from any of the subjects listed in Clause 2. above, or from other courses approved by the Committee on Undergraduate Studies of the Faculty of Science (see Note 5.), provided that, of the 120 credit hours required:
  - a. candidate shall have completed at least 78 credit hours in courses from the subjects listed in Clause 2. above, including the Major courses and the courses required for admission; See Notes 3. and 5.
  - b. there shall be not fewer than five subjects in which a candidate shall have completed courses. At least four of these subjects shall be chosen from the subjects listed in Clause 2. above. In the case of unspecified transfer credits awarded in a subject area not taught at Memorial University of Newfoundland any number of such transfer credits in the aggregate shall count as one subject area.
  - c. not more than 15 unspecified transfer credit hours awarded in a subject area not taught at Memorial University of Newfoundland shall be used to satisfy the requirements of the degree.
4. Before a candidate registers, the Head of the Department of his or her Major, or delegate, shall approve a candidate's program which is in accordance with the above regulations. The Head of the Department or delegate shall advise each candidate of programs suitable for his or her particular needs.
5. To obtain a general degree of Bachelor of Science a candidate shall have:
  - a. satisfied the conditions of **UNIVERSITY REGULATIONS - General Academic Regulations (Undergraduate), Graduation under Application for Graduation - Degrees, Diplomas and Certificates;**
  - b. obtained an average of at least 2.0 points per credit hour in the 78 credit hours in Science required for the degree;
  - c. obtained an average of at least 2.0 points per credit hour in the minimum number of credit hours in the major subject (or, in the case of joint majors, subjects) required for the major program (or, in the case of joint majors, programs).
6. Where a student satisfies the separate departmental regulations for a major in two or more subjects for which a specific joint program does not exist, such subjects shall be recognized as the major subjects for the general degree of Bachelor of Science.
7. A candidate may complete a minor of at least 24 credit hours in courses from a subject area other than that of the Major chosen from Clause 2. c. above or from minors available in the Faculty of Arts, the Faculty of Business Administration, and the School of Music. (It should be noted that because of departmental regulations for the Major, not every candidate may be able to fit a minor into his or her 120 credit hour program).
  - a. The subject of the candidate's minor shall be that declared by the candidate on the Change of Academic Program Form which must then be signed by the Head of the Department of the Minor.
  - b. A candidate must follow the departmental regulations for the Minor as set forth in the appropriate section of the Calendar.
  - c. The Head of the Department of the Minor will advise the candidate on the selection of courses in the Minor.
  - d. Students who have taken courses appropriate to their Minor at another university are required to complete at least 6 credit hours in courses from that subject at this University. These courses must be chosen in consultation with the Head of the Department of the Minor program.
  - e. A candidate must obtain a grade point average of at least 2.0 in the credit hours prescribed for the minor program.

- Notes:
1. Departmental regulations are not intended to debar students from taking more than the required courses in the subject of their Major.
  2. Students who have taken courses in the subject of their Major at another university are required to complete at least 12 credit hours in courses from that subject at this University.
  3. Science 2010/2011 may be used to fulfil in part the requirement of 78 credit hours in Science.
  4. Biology 2120 may not be used for credit by Biology Majors.
  5. When Science course equivalents have been established by Department Heads for Engineering courses, credit may not be obtained for both the Engineering course and the established equivalent course offered by the Faculty of Science.
  6. In the case of Biochemistry the courses for the Biochemistry program shall include Chemistry 2400 and 2401.

## 2.5 Regulations for the Honours Degree of Bachelor of Science

A program is offered leading to the Honours Degree of Bachelor of Science. An Honours degree offers greater specialization in a given

field of knowledge than a General degree, and requires higher than average academic achievement. Possession of this degree will be of great advantage to all students planning more advanced work in their chosen field. In many cases, an Honours degree is a prerequisite for admission to a graduate program.

### 1. Admission and Registration

- a. Declaration of Intent: A candidate for an Honours degree shall declare in writing his (her) intention to pursue an Honours program and to obtain an Honours degree in a specified subject or subjects. Such declaration shall be submitted to his (her) Department(s) of specialization and to the Registrar not earlier than the beginning of his (her) fifth semester at the University, and not later than the final date set for the application for a degree.

*Note: An otherwise qualified student who fails to declare his (her) intention to obtain an Honours degree on or before the last day of the period outlined above shall be awarded a General degree even if he (she) fulfils all other requirements for an Honours degree. The University cannot undertake to notify him (her) that he (she) may be eligible for an Honours degree.*

- b. At the beginning of each registration period the Head(s), or delegate(s), of the Department(s) in which a candidate is taking Honours, shall approve a candidate's program. The Head(s) of Department(s), or delegate(s), shall advise each candidate of programs suitable for his or her particular needs.
- c. Students who have been awarded a Bachelor of Science (General) degree may convert it to a Bachelor of Science (Honours) degree by declaring their intention and by completing the requirements for the Honours degree as outlined in these regulations.

### 2. Course Requirements

- a. i. For the Honours Degree of Bachelor of Science with a single subject major a candidate will be required to have completed 120 prescribed credit hours in courses. For the Joint Honours Degree of Bachelor of Science a candidate will be required to have completed either 120 or 135 credit hours as prescribed by the specific program.
- ii. Clause 2.a. i. notwithstanding, certain Departmental regulations preclude the possibility of completing a single subject Honours degree in 120 credit hours and may require the completion of 123, 126 or 129 credit hours in courses. (See Note below). In such cases all courses required to satisfy requirements of the degree will be used to determine Academic Standing 6. b. below.

*Note: The requirements for an Honours Degree of Bachelor of Science cannot be completed in 120 credit hours if any of the following three statements is true: (i) the student is a major in Chemistry, or Physics and has completed Mathematics 1080; (ii) the student is a major in Chemistry or Physics and has completed Chemistry 1800; (iii) the student is a candidate for the Honours B.Sc degree in Chemistry or Physics and has completed Physics 1021. Such students will only meet the degree requirements after completing 123, 126 or 129 credit hours in courses.*

- b. Courses shall be chosen so that a candidate shall have completed:

Either, (i) at least 60 credit hours from courses in one of the following subjects, including the courses in that subject completed at the first year level: Biology, Biochemistry, Chemistry, Computer Science (See Note 2.), Earth Sciences, Economics, Geography, Mathematics and Statistics, Physics and Psychology.

*Notes: 1. For options in the Biochemistry, Dietetics and Nutrition programs the courses shall be those specified in the respective programs.  
2. For the Behavioural Neuroscience Program, the courses shall be those specified in the program.*

or, (ii) at least 84 credit hours in courses from two subjects listed in i. above, including the courses in these subjects completed at the first year level, with no fewer than 36 credit hours in either subject approved by the Committee on Undergraduate Studies of the Faculty of Science on the recommendation of the respective Heads of Departments.

or, (iii) in special circumstances, a program of at least 90 credit hours in courses from two or more subjects, including the courses in these subjects completed at the first year level, one of which need not be taken from those listed in i. above, as recommended by the Heads of the Departments concerned and approved by the Committee on Undergraduate Studies of the Faculty of Science.

- c. Further courses may be chosen from any of the subjects listed in Clause 2. b. above, or from other courses recognized for this purpose by the Committee on Undergraduate Studies of the Faculty of Science (see Note 5 of the Bachelor of Science General Degree) provided that, of the 120 or more credit hours required:
  - i. a candidate shall have completed at least 90 credit hours in courses from the subjects listed in Clause 2. b. above, including those completed at the first-year level, and
  - ii. there shall be no fewer than four subjects in which a candidate shall have completed courses. In the case of unspecified transfer credits awarded in a subject area not taught at Memorial University of Newfoundland, any number of such transfer credits in the aggregate shall count as one subject area.
  - iii. Not more than 15 unspecified transfer credit hours in courses awarded from a subject area not taught at Memorial University of Newfoundland shall be used to satisfy the requirements of the degree.

### 3. Comprehensive Examination and Dissertation

- a. In addition to the regular examinations, a candidate in an Honours program shall pass a general comprehensive examination in his (her) Major subject or subjects. Alternatively, a candidate may be required to submit a dissertation, which at the discretion of the Head(s) of the Department(s) of specialization may be followed by an oral examination thereon.
- b. If a candidate is required to submit a dissertation, such dissertation must be submitted to the University Library before the degree is conferred. All Honours dissertations in the University Library shall be available for unrestricted consultation by students and faculty except under very exceptional circumstances which must be approved by the Committee on Undergraduate Studies. Copyright remains with the author. A signed release form must accompany an essay or a dissertation when it is submitted to the University Library.
- c. The deadline for the submission of Honours dissertations shall be no later than three weeks before the end of the final semester of the candidate's program.
- d. The Honours dissertation shall be equivalent to either a 3 credit hour course or a 6 credit hour linked course as specified in the course offerings of each Department.

### 4. Departmental Regulations

Candidates for Honours Degrees shall also comply with such additional requirements of the appropriate Department(s) as are approved by the Senate and printed in the Calendar.

### 5. Residence Requirements

- a. To qualify for an Honours Degree in Science, a candidate shall attend a recognized university or an equivalent institution for at least seven semesters as a full-time student. Honours candidates transferring credits to Memorial University of Newfoundland from other universities or equivalent institutions shall either spend a minimum of four of the seven semesters as full-time students at Memorial University of Newfoundland, and take a minimum of 24 credit hours in courses from their Honours



discipline or take a minimum of 36 credit hours in courses from their Honours discipline as full-time students at Memorial University of Newfoundland (whichever is to their advantage), provided that the total number of semesters spent as full-time students at this and other recognized universities or equivalent institutions will not be less than seven.

- b. To qualify for an Honours Degree in Science and additionally a second degree, a candidate shall attend this University for at least ten semesters as a full-time student, except with the special permission of the Faculty Committee on Undergraduate Studies.

#### 6. Academic Standing

In order to graduate with an Honours degree, a candidate shall obtain:

- a. a grade of "B" or better, OR an average of 75% or higher (whichever is to the candidate's advantage) in the minimum number of courses in the Honours subject (or subjects) prescribed by the Department (or, in the case of joint Honours, Departments) concerned, excluding the 1000-level courses,  
AND
- b. an average of at least 2.75 points on the total number of courses required for the degree (see **UNIVERSITY REGULATIONS - General Academic Regulations (Undergraduate), Grading** for explanation of the point system).

Note: A student may, with the approval of the Head of the Department and the Committee on Undergraduate Studies, repeat or substitute up to three courses in order to meet the requirements of Clause 6.a. above. In counting repeats, each attempt at the same course will count as one course towards the maximum. That is, the same course, repeated three times, would place a student at the maximum and no additional repeats or substitutions would be allowed.

#### 7. Classification of Degrees

- a. If the candidate's general average is 3.25 or better per required course, and his (her) average for the courses in his (her) Honours subject (excluding 1000-level courses) is 3.50 or better, he (she) shall be awarded an Honours degree with First Class standing.
- b. If the candidate fulfils the conditions of Clause 6. but not of Clause 7 a., he (she) shall be awarded an Honours degree with Second Class standing.
- c. No classification will be given to the degree awarded a candidate who has completed (i) fewer than one half of the courses required for the degree at this University, or (ii) who has completed fewer than one half of the courses required for the degree at this University since 1959. All candidates for such degrees shall, however, fulfil the conditions of Clause 6. on the courses taken at the University since September, 1959, in order to qualify for the degree.
- d. A declared candidate for an Honours degree who fails to attain the academic standing specified in Clause 6. but fulfils the academic requirements for a General Degree shall be awarded a General Degree, the classification of which shall be determined in accordance with the **UNIVERSITY REGULATIONS - General Academic Regulations (Undergraduate), Graduation**.

### 3 Joint Programs

The following joint programs are offered by Departments in the Faculty of Science, and the regulations for each program are joint Departmental Regulations.

Note: for convenience of reference the joint programs are listed below in alphabetical sequence.

1. Joint Honours
2. Joint Majors
3. Joint Options

#### 3.1 Biochemistry (Nutrition)/Psychology (Behavioural Neuroscience) Joint Honours

The following courses (or equivalents) are required:

1. Chemistry 1010 and 1011 (or 1050, 1051), Biology 1001 and 1002, Mathematics 1000, Physics 1020 or 1050, and 1021 (or 1051), English 1080 and 1110.
2. Biochemistry 2100, 2101, 3106, 3200, 3201, 3202, 4002, 4300, 4301, 4502, Medicine 310A/B.
3. Psychology 1000, 1001, 2520, 2570, 2910, 2911, 3250, 3800, 3801, 3900, one of 4810, 4850 or 4851; 4870.
4. Either Biochemistry 499A/B or Psychology 499A/B.
5. Chemistry 2400, 2401 or Chemistry 2440.
6. Other courses to complete at least the prescribed minimum of 120 credit hours in courses for the Joint Honours Degree.

Notes: 1. In accordance with Clause 6.a. of the Regulations for the Honours Degree of Bachelor of Science, Honours candidates must obtain a grade of "B" or better, or an average of 75% or higher in all the required courses listed in Clauses 2., 3., and 4. above, except those at the 1000 level.  
2. Students in first year intending to follow this program should note the regulations as outlined for admission to Major programs in Psychology and that the deadline for submission of a completed application form to the Psychology Department is June 1 for the Fall semester and October 1 for the Winter semester.

#### 3.2 Biochemistry/Psychology (Behavioural Neuroscience) Joint Honours

The following courses (or equivalents) are required to complete the 120 credit hours in courses required for the degree:

1. Chemistry 1050 and 1051 (or equivalents), Biology 1001 and 1002, Mathematics 1000 and 1001, Physics 1050 or 1020, and 1051, English 1080 and 1110.
2. Biochemistry 2100, 2101, 3105, 3106, 3107, 3108, Medicine 310A/B, either 4210 or 4211, 9 credit hours chosen from Biochemistry 4002, 4101, 4102, 4103, 4104, 4105, 4200, 4201, 4220.

Note: Only one of 4105 and 4220 may be chosen.

3. Psychology 1000, 1001, 2520, 2570, 2910, 2911, 3250, 3800, 3801, 3900; one of 4810, 4850 or 4851; 4870.
4. Either Biochemistry 499A/B or Psychology 499A/B.
5. Chemistry 2300, 2400, 2401.

Notes: 1. In accordance with Clause 6. a. of the Regulations for the Honours Degree of Bachelor of Science, Honours candidates must obtain a grade of "B" or better, or an average of 75% or higher in all the required courses listed in Clauses 2., 3. and 4. above, except those at the 1000 level.  
2. Students in first year intending to follow this program should note the regulations for admission to Major programs in Psychology and that the

*deadline for submission of a completed application form to the Psychology Department is June 1 for the Fall semester and October 1 for the Winter semester.*

### 3.3 Physics/Biochemistry Joint Honours

The following courses are prescribed:

1. English 1080 and 1110 (or equivalent), Chemistry 1050 and 1051 (or Chemistry 1010, 1011, and 1031), Mathematics 1000 and 1001, Physics 1050 and 1051 (or 1020, 1021 and 1051).
2. Chemistry 2400, 2401.
3. Chemistry 2300 or Physics 2053
4. Mathematics 2000, 2050, Applied Mathematics/Pure Mathematics 3260, either Applied Mathematics/Pure Mathematics 3202 or Physics 3810.
5. Biochemistry 2100, 2101, 3105, 3106, 3107, 3108, Medicine 310A/B; plus 9 credit hours in courses to be selected from Biochemistry 4002, 4101, 4102, 4103, 4104, 4200 and 4201; plus a 3 credit hour course to be selected from Biochemistry 4210 or 4211.
6. Physics 2055, 2750 or 2056, 2820, 3220, 3400, 3500, 3750, 3820, 3821, 3900, plus one 4000 level Physics course.
7. One course to be selected from Physics 3150, 3300, 3410, 3751. Physics 3751 is recommended.
8. Either Physics 490A/B or Biochemistry 499A/B.
9. Other courses to complete the prescribed minimum of 135 credit hours in courses for the Joint Honours degree.

### 3.4 Chemistry/Biochemistry Joint Honours Degree

The following courses (or their equivalents) are required:

1. Chemistry 1050 and 1051 (or Chemistry 1010, 1011 and 1031) or their equivalents, Mathematics 1000 and 1001, Physics 1050 and 1051, 6 credit hours in first year English courses. Biology 1001 and 1002 are highly recommended.
2. Mathematics 2000, 2050, Applied Mathematics/Pure Mathematics 3260.
3. Chemistry 2210, 2300, 2400, 2401, 3100, 3211, 3300, 3301, 3410, 3411, 3500; 4110; and 6 further credit hours in Chemistry courses at the 4000 level.
4. Biochemistry 2100, 2101, 3105, 3106, 3107, 3108, Medicine 310A/B, either Biochemistry 4210 or 4211, 9 credit hours chosen from Biochemistry 4002, 4101, 4102, 4103, 4104, 4105, 4200, 4201, 4220.  
Note: *Only one of 4105, 4220 may be chosen.*
5. Either Chemistry 490A/B or Biochemistry 499A/B.
6. Other courses to complete the prescribed minimum of 135 credit hours in courses for the Joint Honours Degree. Physics 2820 and/or Physics 2750 are recommended.

### 3.5 Cell Biology and Biochemistry Joint Honours

Students must have at least an overall average of 65% in English 1080 and 1110 (or equivalents), Mathematics 1000 and 1001, Biology 1001 and 1002, Chemistry 1050 and 1051 (or equivalents), Physics 1050 and 1051 (or 1020, 1021 and 1051).

The following courses, including prerequisites where applicable, will be required.

1. Biochemistry 2101, 3105, 3106, 3107, 3108, either 4210 or 4211, 12 credit hours chosen from 4002, 4101, 4102, 4103, 4104, 4105, 4200, 4201.
2. Biology 2060, 2250, 2600, 2900, 3050 and 9 credit hours chosen from 3500, 3530, 3620, 4000, 4200, 4241. In addition, further Biology courses must be selected by the student to make up a minimum of 42 credit hours in Biology including Biology 1001 and 1002 but not including Biology 499A or 499B.
3. Either Medicine 310A/B, or Biology 3401 plus one of Biology 3402, 4245 or 4404.
4. Chemistry 2300, 2400, 2401, 3100; either 3410 or 3411.
5. Statistics 2550 or equivalent.
6. An Honours Dissertation (Biology 499A/499B or Biochemistry 499A/499B).
7. Other courses to complete the prescribed minimum of 135 credit hours in courses for the Joint Honours Degree.

Note: *Students may count only one of the two courses, Biochemistry 4105 or Biology 4200, for credit in this program.*

The topic of the Honours dissertation must be chosen with the approval of both Departments. A faculty member of either Department may act as supervisor.

Seventy-eight credit hours in Biology, Biochemistry and Chemistry courses beyond the first-year level from those listed in the program shall contribute to those in which a grade of "B" or an average of 75 or higher is required. Medicine 310A/B counts as Biochemistry for these seventy-eight credit hours.

### 3.6 Biology and Earth Sciences Joint Honours

The following courses, including prerequisites where applicable, will be required:

1. English 1080 and 1110 (or equivalents), Mathematics 1000 and 1001, Biology 1001 and 1002, Earth Sciences 1000 and 1002, Chemistry 1010 and 1011 (or 1050 and 1051), Physics 1020 and 1021 (or 1050 and 1051).
2. Chemistry 2440, Biochemistry 2101, Biochemistry 3106, one of Statistics 2550, 2560 or 2510.
3. Biology 2060, 2250, 2600, 2900, one of 3401, 3402, 4245 or 4404; plus Biology 3710, 3711, and 4505. In addition, further Biology courses must be selected by the student in consultation with the supervisor to make up a minimum of 42 credit hours in Biology not including Biology 499A or 499B.
4. Earth Sciences 2030, 2031, 2502, 2905; plus a minimum of 24 credit hours in other Earth Science courses from 2000 to 4000 level, at least 3 credit hours of which must be at 4000 level. Earth Sciences 2150, 2914, 2915, 2916, and 4310 cannot be used to fulfill this requirement. Career-related streams outlined in the departmental Student Handbook should be used as a guide to course selection so as to achieve a concentration in one facet of Earth Sciences.
5. An Honours dissertation (Biology 499A/B or Earth Sciences 499A/B). The topic of the Honours dissertation must be chosen with the approval of both Department Heads. A faculty member of either Department may act as supervisor.

- Other courses to complete the prescribed minimum of 135 credit hours in courses for the Honours degree, with at least 84 credit hours in courses in Biology and Earth Sciences combined.

Any change in the program of study must have the prior approval of the Heads of the two Departments concerned.

### 3.7 Biology/Psychology Joint Honours

The following forty courses (or equivalent) are required:

- Biology 1001, 1002, 2060, 2250, 2600, 2900; one of 3401, 3402, 4245, 4404; four Biology electives not including Biology 499A or 499B.
- Psychology 1000, 1001, 2520, 2570, 2910, 2911, 3250, 3800 or 3801; 3900, 4910; one of the following: 3050, 3100, 3350, 3450, 3620, 3650; one further 4000 level Psychology research experience course.
- Biology or Psychology 3750, 4701, 499A/B.
- English 1080 and 1110; Mathematics 1000; Chemistry 1010 and 1011 (or 1050 and 1051), and 2440; Physics 1020 (or 1050) and 1021 (or 1051); Biochemistry 2101 and 3106.
- Other courses, if necessary, to complete at least 120 credit hours of courses.

### 3.8 Biology/Psychology (Behavioural Neuroscience) Joint Honours

The following forty courses (or equivalents) are required:

- Biology 1001, 1002, 2060, 2250, 2600, 2900; one of 3401, 3402, 4245, 4404; five Biology electives not including Biology 499A or 499B.
- Psychology 1000, 1001, 2520, 2570, 2910, 2911, 3250, 3800, 3801, 3900; one of 4810, 4850 or 4851; 4870.
- Biology or Psychology 499A/B.
- Biochemistry 2101, 3106.
- English 1080 and 1110; Mathematics 1000 and 1001; Physics 1020 or (1050) and 1021 or (1051); Chemistry 1010 and 1011 (or 1050 and 1051), and 2440 (or 2400 and 2401);
- Other courses, if necessary, to complete at least 120 credit hours of courses.

Note: *In accordance with Clause 6.a. of the Regulations for the Honours Degree of Bachelor of Science, Honours candidates must obtain a grade of "B" or better, OR average of 75% or higher in all the required courses listed in Clauses 1, 2, 3, and 4 above, except those at the 1000 level.*

### 3.9 Statistics/Biology Joint Honours (B.Sc. Only)

See General Regulations for Honours Degree. Students shall complete the following requirements:

- Mathematics 1000 and Mathematics 1001, Biology 1001 and 1002, English 1080 and 1110, Chemistry 1010 and 1011 (or 1050 and 1051), Physics 1020 and 1021, or equivalents;
- Mathematics 2000, 2050, 2051, Statistics 2500 or 2510, 2501 or 2560 or 2511, 3520, 3521, 3530, and 4581;
- nine further credit hours in Statistics courses (excluding those with second digit 0) including at least 6 credit hours in courses at the 4000 level or higher but not including Statistics 4599;
- Chemistry 2440 (or 2400 and 2401). Biochemistry 2101 and 3106. Computer Science 2602;
- Biology 2060, 2250, 2600, 2900, one of 3401, 3402, 4245, or 4404. In addition, further Biology courses must be selected by the student in consultation with the supervisor to make up a minimum of 42 credit hours in Biology but not including Biology 499A or 499B.
- Either Biology 499A/B or Statistics 4599.

### 3.10 Joint Honours in Computer Science and Geography

#### 1. Computer Science Requirements

See General Regulations for the Honours Degree.

Forty-eight credit hours in Computer Science courses are required for the Joint Honours:

- 1710, 2710, 2711, 2742, 2760, 3715, 3716, 3719, 3724, 3725, 3754, 4751 and 4770.
- Six additional credit hours in courses at the 4000 level not including 4780.
- Three additional credit hours in courses at the 3000 level or beyond.

#### 2. Geography Requirements

Forty-eight credit hours in Geography courses are required for the Joint Honours: 1050, 2001, 2102, 2195, 2226, 2302, 2425, 3202, 3222, 3226, 3250, 3260, 3303, 4202, 4250, 4261, and 4291.

#### 3. Additional Requirements

- Mathematics 2000, 2050, and Pure Mathematics 2320.
- An Honours Dissertation (either Computer Science 4780 or Geography 4999). The topic for dissertation must be chosen with the prior approval of the Heads of both Departments.

### 3.11 Joint Honours in Computer Science and Physics

The following courses are prescribed:

- Chemistry 1050 and 1051 (or Chemistry 1010, 1011, and 1031).
- Computer Science 1710, 2710, 2711, 2742, 2760, 3715, 3716, 3719, 3724, 3725, 3731, 3754 and 4770.
  - Nine additional credit hours in Computer Science courses numbered 3000 or higher, including at least 6 credit hours in courses numbered 4000 or higher.
- Physics 1050 and 1051, or Physics 1020, 1021 and 1051.
  - Physics 2053, 2055, 2750 or 2056, 2820, 3220, 3400, 3500, 3750, 3820, 3821, 4500, and 3230 or 3900.
- Physics 490A/B or Computer Science 4780.

5. Physics 3810 or Applied Mathematics/Pure Mathematics 3202.
6. a. Mathematics 1000 and 1001.  
b. Mathematics 2000, 2050, Pure Mathematics 2320 and Applied Mathematics/Pure Mathematics 3260  
Statistics 2510 is recommended.

The topic for the Honours project or thesis, Computer Science 4780 or Physics 490A/B, must be chosen with the prior approval of both Departments.

### 3.12 Joint Honours in Geography/Earth Sciences (B.Sc. Only)

The following courses will be required. A few prerequisites are not met by this list of courses, and students are advised to obtain advice from instructors in such cases to be sure that they are prepared for course material. Both departmental Heads can advise students on a workable sequencing of courses to complete the degree in a timely manner.

1. Six credit hours in first-year English courses; Geography 1050; Earth Sciences 1000 and 1002; Mathematics 1000 and 1001; Chemistry 1010 and 1011 or equivalent; Physics 1050 and (1051 or the former 1054) OR Physics 1020 and 1021.
2. One of Geography 3222, Statistics 2500, 2510.
3. Biology 2120 or Biology 1001 and 1002.
4. Geography 2102, 2195, 2302, 2425, 3230.
5. Earth Sciences 2030, 2031, 2502 and 2905.
6. Either Earth Sciences 499A and 499B, or Geography 4990 and 4999.
7. Twenty-one additional credit hours in Geography courses, of which at least 12 credit hours must be selected from the group Geography 2200, 3110, 3120, 3140, 3150, 3250, 3425, and of which at least 6 credit hours must be in courses at the 4000 level.
8. Twenty-one additional credit hours in Earth Sciences courses, of which at least 9 credit hours must be in courses at 3000 level and at least 6 credit hours must be in courses at 4000 level. Earth Sciences 2150, 2914, 2915, 2916 and 4310 cannot be used to fulfill this requirement.
9. Other courses to complete the prescribed minimum of 120 credit hours.

The topic of the Honours dissertation must be chosen with the approval of both Departments. A faculty member of either Department may act as supervisor.

Any change in the program of study must have the prior approval of the Heads of the two Departments concerned.

### 3.13 Statistics/Computer Science Joint Honours (B.Sc. Only)

See General Regulations for Honours Degree. In addition to Mathematics 1000 and 1001 the following courses numbered 2000 or higher are required:

1. Mathematics 2000, 2050, 2051, Pure Mathematics 2320, 3340, Pure Mathematics/Statistics 3410, 3411, Statistics 3520, 3521, 3530, 3540, and 4590;
2. Twenty-four further credit hours in Statistics courses (excluding those with second digit 0) including at least 12 credit hours in courses numbered 4000 or higher, but not including Statistics 4599 and 4581;
3. Computer Science 1710, 2710, 2711, 2742, 2760, 3715, 3716, 3719, 3724, 3725, 3754, 4734, and 4770.
4. Six additional credit hours in Computer Science courses at the 4000 level, not including 4780.
5. Either Computer Science 4780 or Statistics 4599.

### 3.14 Earth Sciences/Chemistry Joint Honours

The following courses, including prerequisites, where applicable, will be required:

1. English 1080 and 1110 (or equivalents), Mathematics 1000 and 1001, Earth Sciences 1000 and 1002, Chemistry 1050 and 1051 (or 1010, 1011 and 1031) or their equivalents, Physics 1050 (or 1020 and 1021) and 1051.
2. Earth Sciences 2030, 2031, 2400, 2401, 2502, 2905, 3600, 3701 (or 2702), 4901; one of 3053, 3054 or 3055; at least one of Earth Sciences 3210 or 3811; plus 6 additional credit hours in Earth Sciences courses.
3. Chemistry 2210, 2300, 2400, 2401, 3100, 3211, 3300, 3301, 3410, 3411, 3500, and at least 3 credit hours in Chemistry courses at the 4000 level.
4. Mathematics 2000, 2050, Applied Mathematics/Pure Mathematics 3260.
5. Physics 2820.
6. Biology 2120 (or Biology 1001 and 1002).
7. An Honours Dissertation (Earth Sciences 499A/B or Chemistry 490A/B). The topic of the Honours Dissertation must have the prior approval of the Heads of the two Departments. A faculty member of either Department may act as supervisor.
8. Other courses to complete the prescribed minimum of 135 credit hours.

Any change in the program of study must have the prior approval of the Heads of the two Departments concerned.

### 3.15 Joint Honours in Earth Sciences/Physics

This program was formerly in the Earth Sciences section of the calendar as an Honours B.Sc. Degree in Geophysics. The following courses will be required:

1. English 1080 and 1110 (or equivalents), Mathematics 1000 and 1001, Earth Sciences 1000 and 1002, Chemistry 1010 and 1011 (or equivalent), Physics 1050 and 1051 (or Physics 1020, 1021 and 1051).
2. Earth Sciences 2030, 2031, 2400, 2401, 2502, 2905, 3170, 3172, 4105, 4171, 4173, 4179, 499A/B.
3. Physics 2055, 2750 or 2056, 2820, 3220, 3230, 3500, 3820, 3821; plus 9 other credit hours in Physics courses at 3000 level or higher.
4. One of Physics 3810 or Applied Mathematics/Pure Mathematics 3202.
5. Mathematics 2000, 2050, and 3260.
6. Other courses to complete at least a minimum of 120 credit hours.

Any change in the program of study must have the prior approval of the Heads of the two Departments concerned.

### 3.16 Joint Honours in Geophysics and Physical Oceanography

The program requires the following courses:

1. English 1080 and 1110 (or equivalent), Chemistry 1050 and 1051 (or Chemistry 1010, 1011, and 1031), Mathematics 1000 and 1001, Earth Sciences 1000 and 1002, Physics 1050 and 1051 (or Physics 1020, 1021 and 1051).
2. Earth Sciences 2905, 3170, 3172, 4105, 4171, 4173, 4179 and 10 credit hours at the 2000 level or higher with at least 3 credit hours at the 3000 level.
3. Physics 2053, 2055, 2820, 3220, 3300, 3500, 3820, 3821, 4205, 4300, 4330 plus one of Physics 3600, 3150, 3400, 3550 or 3900.
4. Mathematics 2000, 2050, 2051, 3202 and 3260.
5. Either Earth Sciences 499A and 499B or Physics 490A and 490B.
6. Other courses to complete the prescribed minimum of 120 credit hours.

### 3.17 Applied Mathematics/Chemistry Joint Honours (B.Sc. Only)

See General Regulations for Honours Degree. In addition, Chemistry 1050 and 1051 (or Chemistry 1010, 1011 and 1031), Mathematics 1000, and 1001, Physics 1050 (or 1020) and 1051, the following courses numbered 2000 or higher are required:

1. Chemistry 2210, 2300, 2400, 2401, 3100, 3211, 3300, 3301, 3500, 4300, 4302, and a 3 credit hour Chemistry elective.
2. Mathematics 2000, 2050, 2051, 3000, 3001, Applied Mathematics 2130, 3132, 3161, Applied Mathematics/Pure Mathematics 3202, 3210, 3260, and Applied Mathematics 4160.
3. Physics 2055, 2056 or 2750, 2820, 3220 and 3230.
4. either Applied Mathematics 4199 or Chemistry 490A/B.

The following courses are recommended:

Chemistry 3410, 3411, 4100, Applied Mathematics 3100, 4131, 4132, 4133, Applied Mathematics/Pure Mathematics 3240, Pure Mathematics 3320, Statistics 2510, Physics 3500 and 4500.

### 3.18 Pure Mathematics/Computer Science Joint Honours (B.Sc. Only)

See General Regulations for Honours Degree. Students shall complete the following:

At least 51 credit hours in Computer Science courses are required including the following:

1. 1710, 2710, 2711, 2742, 2760, 3715, 3716, 3719, 3724, 3725, 3754, and 4770.
2. Excluding 4780, 15 additional credit hours from courses numbered 3000 or higher, at least 9 credit hours of which must be in courses at the 4000 level.

The following courses in Mathematics and Statistics are required:

1. Mathematics 1000, 1001, 2000, 2050, 2051, Applied Mathematics 2130, Pure Mathematics 2320, Mathematics 3000, 3001, Applied Mathematics/Pure Mathematics 3202, 3210, 3260, Pure Mathematics 3301, 3320, 3340, Statistics 2510;
2. Excluding Pure Mathematics 4399, 15 additional credit hours in courses offered by the Department of Mathematics and Statistics numbered 3000 or higher including at least 9 credit hours from courses numbered 4000 or higher and at least 9 credit hours in Pure Mathematics courses;
3. An Honours Dissertation in one of the departments, with the topic chosen in consultation with both departments.

Note: *There is an Undergraduate Advisor in each Department. These advisors should be consulted on all academic matters.*

### 3.19 Pure Mathematics/Statistics Joint Honours

See General Regulations for Honours Degree. In addition to Mathematics 1000 and 1001 the following courses numbered 2000 or higher are required:

1. Mathematics 2000, 2050, 2051, 3000, 3001, Applied Mathematics 2130, Pure Mathematics 2320, Applied Mathematics/Pure Mathematics 3202, 3210, 3260, Pure Mathematics/Statistics 3410, 3411, Statistics 3520, 3521, 3530, Pure Mathematics/Statistics 4400, 4401, 4410;
2. A computing course early in the program is required. Applied Mathematics 2120 is highly recommended;
3. either Pure Mathematics 4399 or Statistics 4599;
4. one of: Pure Mathematics 3301, 3330, or 3340;
5. Twenty-one further credit hours in Pure Mathematics and/or Statistics courses numbered 3000 or higher of which at least 12 credit hours must be from courses numbered 4000 or higher excluding Statistics 4581.

### 3.20 Applied Mathematics/Physics Joint Honours

The following courses are prescribed:

1. Chemistry 1050 and 1051 (or Chemistry 1010, 1011, and 1031).
2. Physics 1050 (or 1020) and 1051.
3. Physics 2053, 2055, 2056 or 2750, 2820, 3220, 3230, 3400, 3410, 3500, 3750, 3900, 4500, 4850
4. Mathematics 1000 and 1001
5. Mathematics 2000, 2050, 2051, 3000, 3001, Applied Mathematics 2130, Applied Mathematics/Pure Mathematics 3210, Applied Mathematics 3111, Applied Mathematics/Pure Mathematics 3260.
6. Applied Mathematics 3132 or Computer Science 3731
7. Applied Mathematics/Pure Mathematics 3202 or Physics 3810
8. Applied Mathematics 3161 and 4160, or Physics 3820 and 3821
9. Physics 490A/B, or Applied Mathematics 4199 plus another 3 credit hour course in Mathematics numbered 4000 or higher.
10. Three additional credit hours in a Physics course numbered 3000 or higher and 3 additional credit hours in a Physics course

numbered 4000 or higher.

11. at least 9 additional credit hours in courses numbered 4000 or higher offered by the Department of Mathematics and Statistics. The topic for the Honours project or thesis, Applied Mathematics 4199 or Physics 490A/B, must be chosen with the prior approval of both Departments.

### 3.21 Physics/Chemistry Joint Honours

The following courses are prescribed:

1. Mathematics 2000, 2050, and Applied Mathematics/Pure Mathematics 3260.
2. Physics 1050 (or 1020 and 1021) and 1051.
3. A minimum of 45 additional credit hours in Physics courses, which shall include 2055, 2750 or 2056, 2820, 3220, 3230, 3500, 3750, 3820, 3821, 3900, and 3 credit hours in a Physics course numbered 3000 or higher and 12 credit hours in Physics courses numbered 4000 or higher.
4. Physics 3810 or Applied Mathematics/Pure Mathematics 3202.
5. Chemistry 1050 and 1051 (or Chemistry 1010, 1011 and 1031), 2210, 2300, 2400, 2401 and 30 credit hours in Chemistry courses numbered 3000 or higher including 3100, 3211, 3300, 3301, 3500, 4300 and 4302.
6. The courses selected in accordance with 3. and 5. above shall include Chemistry 490A/B or Physics 490A/B.

The topic for the Honours thesis, Chemistry 490A/B or Physics 490A/B, must be chosen with the prior approval of both Departments.

### 3.22 Joint Major in Computer Science and Economics (B.Sc. Only)

#### 1. Computer Science Requirements

Forty-two credit hours in Computer Science courses are required: 1710, 2710, 2711, 2742, 2760, 3715, 3716, 3719, 3724, 3725, 3731, 3753, 3754, and 4770.

#### 2. Economics requirements

A total of 42 credit hours in Economics courses are required: 2010, 2020, 2550, 3000, 3001, 3010, and 6 credit hours from either 3550 and 3551, or 4550 and 4551 are obligatory.

The remaining 18 credit hours shall be chosen from among the various Economics courses in consultation with the Head of the Department or delegate, and will include at least 9 credit hours in courses at the 4000 level.

#### 3. Additional Requirements: Mathematics 1000, 1001, 2000, 2050, Pure Mathematics 2320, and Statistics 2510

### 3.23 Joint Major in Computer Science and Geography

#### 1. Computer Science Requirements

Thirty-nine credit hours in Computer Science courses are required: 1710, 2710, 2711, 2742, 2760, 3715, 3716, 3719, 3724, 3725, 3754, 4751, and 4770.

#### 2. Geography Requirements

Thirty-nine credit hours in Geography courses are required: 1050, 2001, 2102, 2195, 2302, 2425, 3202, 3222, 3250, 3260, 4202, 4250, 4261.

#### 3. Additional Requirements: Mathematics 2000, 2050, and Pure Mathematics 2320.

### 3.24 Applied Mathematics/Computer Science Joint Major (B.Sc. Only)

The following courses are required

1. Computer Science 1710, 2710, 2711, 2742, 2760, 3715, 3716, 3719, 3724, 3725, 3754, 4770, plus 6 further credit hours in Computer Science courses numbered 3000 or higher.
2. Mathematics 1000, 1001, 2000, 2050, 2051, 3000, Applied Mathematics 2130, Pure Mathematics 2320, Applied Mathematics 3100, 3132, 3161, Applied Mathematics/Pure Mathematics 3202, 3260, Applied Mathematics 4160, 4190, plus one of Applied Mathematics/Pure Mathematics 3210, Applied Mathematics 4131, 4132, 4162

In addition, Statistics 2510 is highly recommended.

### 3.25 Joint Major in Pure Mathematics and Economics (B.Sc. Only)

1. Mathematics 1000, 1001, 2000, 2050, 3000, Applied Mathematics 2130, 3100, Pure Mathematics 2320, Applied Mathematics/Pure Mathematics 3202, 3260, Pure Mathematics 3320, Statistics 2510 and one 4000 level course.
2. A computing course early in the program is required. Applied Mathematics 2120 is highly recommended.
3. Economics: 2010, 2020, 2550, 3000, 3001, 3010, and 6 credit hours from either 3550 and 3551, or 4550 and 4551.
4. Eighteen further credit hours chosen from among the various Economics courses in consultation with the Head of the Department or delegate, including at least 9 credit hours at the 4000 level.

### 3.26 Statistics/Computer Science Joint Major (B.Sc. Only)

In addition to Mathematics 1000, 1001, and Computer Science 1710, the following courses numbered 2000 or higher are required:

1. 2710, 2711, 2742, 2760, 3715, 3716, 3719, 3724, 3725, 3754, 4734, and 4770.
2. Statistics 2510 and 2560.
3. Mathematics 2000, 2050, 2051, Pure Mathematics 2320, 3340, Pure Mathematics/Statistics 3410, 3411, Statistics 3520, 3521, 3540, and 4590.
4. nine further credit hours in Statistics courses numbered 3000 or higher including at least a 3 credit hour course numbered 4000 or higher excluding Statistics 4581.

### 3.27 Joint Major in Applied Mathematics and Economics (B.Sc. Only)

1. Mathematics 1000, 1001, 2000, 2050, 2051, 3000, Applied Mathematics 2130, 3100, Statistics 2510, Applied Mathematics/Pure

Mathematics 3202, 3260, Applied Mathematics 4132.

2. Either Applied Mathematics 3132 and 4131 or 3161 and 4160.
3. A computing course early in the program is required. Applied Mathematics 2120 is highly recommended.
4. Economics: 2010, 2020, 2550, 3000, 3001, 3010, 4550, 4551.
5. Eighteen further credit hours chosen from among the various Economics courses in consultation with the Head of the Department or delegate, including at least 9 credit hours at the 4000 level.

### 3.28 Joint Major in Applied Mathematics and Physics (B.Sc. Only)

1. English 1080 and 1110 (or equivalent).
2. Chemistry 1050 and 1051 (or Chemistry 1010, 1011, and 1031).
3. A computing course early in the program is required. Applied Mathematics 2120 is highly recommended.
4. Physics 1050 (or 1020), 1051, 2053, 2055, 2056 or 2750, 2820, 3220, 3400, 3500, 3750, 3900.
5. Mathematics 1000, 1001, 2000, 2050, 2051, 3000, Applied Mathematics 2130, 3001, Applied Mathematics/Pure Mathematics 3202, 3260, Applied Mathematics 3132.
6. Either Applied Mathematics 3161 or Physics 3820.
7. At least 12 additional credit hours chosen from the Applied Mathematics and Physics courses numbered 3000 or higher. Of the 12 credit hours, 3 are required in Physics and 3 in Applied Mathematics.

### 3.29 Joint Major in Computer Science and Physics

1. Chemistry 1050 and 1051 (or Chemistry 1010, 1011, and 1031).
2. Thirty-nine credit hours in Computer Science are required for the Joint Major: 1710, 2710, 2711, 2742, 2760, 3715, 3716, 3719, 3724, 3725, 3731, 3754, and 4770.
3. Physics 1050 and 1051 (or 1020, 1021 and 1051) plus at least 30 additional credit hours in Physics including 2053, 2055, 2056, 2820, 3220, 3400, 3500, 3550, 3750 and 3900.
4.
  - a. Mathematics 1000 and 1001.
  - b. Mathematics 2000 and 2050, Pure Mathematics 2320, Statistics 2510 and Applied Mathematics/Pure Mathematics 3260.
  - c. Physics 3810 or Applied Mathematics/Pure Mathematics 3202.

### 3.30 Joint Major in Earth Sciences/Physics

This program was formerly in the Earth Sciences section of the calendar as a General B.Sc. Degree in Geophysics. The following courses will be required:

1. English 1080 and 1110 (or equivalents), Mathematics 1000 and 1001, Earth Sciences 1000 and 1002, Chemistry 1010 and 1011 (or equivalent), Physics 1050 and 1051 (or Physics 1020, 1021 and 1051).
2. Earth Sciences 2030, 2031, 2400, 2401, 2502, 2905, 3170, 3172; plus a 3 credit hour course in Earth Sciences 4100 series.
3. at least 30 credit hours in Physics courses at the 2000 level or higher, including Physics 2055, 2056 or 2750, 2820, 3220, 3500.
4. One of Physics 3810 or Applied Mathematics/Pure Mathematics 3202.
5. Mathematics 2000 and 2050.
6. Other courses to complete at least a minimum requirement of 120 credit hours in courses for the General Degree.

Any change in the program of study must have the prior approval of the Heads of the two Departments concerned.

### 3.31 Joint Major in Statistics and Economics (B.Sc. Only)

1. Mathematics 1000, 1001, 2000, 2050, 2051, Statistics 2510, 2560, Pure Mathematics/Statistics 3410, Pure Mathematics/Statistics 3411, Statistics 3520, 3540, 4590.
2. Six further credit hours in Statistics courses numbered 3000 or higher, at least 3 credit hours of which must be numbered 4000 or higher, excluding Statistics 3521 and 4581.
3. Economics: 2010, 2020, 2550, 3000, 3001, 3010, 4550, 4551.
4. Eighteen further credit hours chosen from among the various Economics courses in consultation with the Head of the Department or delegate, including at least 9 credit hours at the 4000 level.

### 3.32 Joint Major in Statistics and Economics (Co-operative) (B.Sc. Only)

The Joint Major in Statistics and Economics Co-Operative Education Option is available to full-time Economics and Statistics majors (B.Sc.) only. The program is available under the Economics Co-operative Education Option (ECEO)

The ECEO provides an excellent mutual opportunity for students and employers. Qualified students will obtain rewarding employment experience in fields related to Economics for several months of continuous duration. Students will learn valuable practical skills in an employment situation during their course of study. Furthermore, paid employment will help to defray the cost of their education. The timing of the Work Terms and the structure of the ECEO generally are such that employers stand to gain from the acquired employable skills of economists and statisticians in training. The objectives of the Work Term component of the ECEO are embodied in the Work Term descriptions below. The descriptions serve to guide the student and the employer toward achieving these objectives.

#### 1. Admission Requirements

- a. Admission is competitive and selective. Therefore, prospective students are encouraged to consider an alternate degree program in the event that they are not accepted into the Joint Co-operative program.
- b. Applicants should note that it is possible to enter Term 1 only in the Fall semester commencing in September of each academic year. Application forms are available in the Department of Economics and the Department of Mathematics and Statistics. The deadline for applications for admission to Term 1 is March 1.
- c. The primary criterion used in reaching decisions on applications for admission is overall academic achievement. Students with weak overall academic records are unlikely to be admitted.
- d. To be eligible for admission to Term 1 an applicant must have successfully completed a minimum of 30 credit hours with an

overall average of at least 65% as follows: All applicants must have completed Economics 2010 and 2020; at least 6 credit hours in English\*; Mathematics 1000 and 1001; and 12 credit hours chosen from courses in the Faculties of Arts or Science.

\*It is recommended that students complete English 1110. Critical Reading and Writing II (Context, Substance, Style) as one of these English courses.

- e. Students may apply for admission to Advanced Standing.
- f. Transfer students from other universities will be placed in that term of the program judged to be appropriate considering equivalent credits, as determined by the Departments.

## 2. Program of Study

- a. Promotion from each of Terms 1 through 6 requires a passing grade in all specified required courses and an overall average of at least 60% in all courses including electives. A student who fails a required course or fails to maintain an overall average of 60% will not be promoted to the next term and will be required to withdraw from the program. The student in question may apply for readmission in a subsequent year after passing the specified required course(s) previously failed, or re-establishing the 60% average.
- b. In addition to the 30 credit hours required for admission, students are required to complete the six academic terms in the ECEO program for a total of 120 credit hours. Students must complete three Work Terms which follow Academic Terms 2, 4, and 5.
- c. Courses shall normally be taken in academic terms or "blocks" in the sequenced course load and order set out in the Academic Course Program Joint Major (Co-operative) Table. Unspecified credits may be used to fulfill elective requirements only.
- d. **UNIVERSITY REGULATIONS - General Academic Regulations (Undergraduate) - Classification of Students** notwithstanding, students do not require special permission to register for courses while on work terms if the courses are in addition to the prescribed program.

## 3. Work Term Placement

See Departmental Regulations in Economics for the Major in Economics (Co-operative), in the Faculty of Arts section of the Calendar.

## 4. Registration and Evaluation of Performance

See Departmental Regulations in Economics for the Major in Economics (Co-operative), in the Faculty of Arts section of the Calendar.

**Academic Course Program - Joint Major in Statistics and Economics (Co-operative) Table**

<b>Term 1 (Fall)</b> Economics 3000 Economics 3550 Statistics 2510 Mathematics 2000 Computer Science 1700	<b>Work Term II (Spring)</b> Economics 399W
<b>Term 2 (Winter)</b> Economics 2550 Economics 3001 Economics 3010 Mathematics 2050 Statistics 2560	<b>Term 5 (Fall)</b> Statistics 3520 Statistics 4590 Six further credit hours in Economics courses Three further credit hours in Statistics courses
<b>Work Term I (Spring)</b> Economics 299W	<b>Work Term III (Winter)</b> Economics 499W
<b>Term 3 (Fall)</b> Economics 4550 Mathematics 2051 Statistics 3410 Three further credit hours in Statistics courses Three credit hours in elective courses [see Note 2]	<b>Term 6 (Spring)</b> Three further credit hours in Economics courses Three credit hours in Science courses [see Note 2] Nine credit hours in elective courses [see Note 2]
<b>Term 4 (Winter)</b> Economics 3011 Economics 4120 Economics 4551 Statistics 3411 Statistics 3540	

Notes: 1. Another 1000-level Computer Science course may be substituted for Computer Science 1700 with the Heads' approvals.

2. Elective courses should be chosen with reference to the Regulations for the General Degree of Bachelor of Science, since courses specified for admission to and completion of the program only partially satisfy these regulations. In particular note that in addition to the 78 credit hours (26 courses) in Science subjects required, at least 3 credit hours in a Science subject other than Mathematics/Statistics, Economics and Computer Science must be completed.

### 3.33 Pure Mathematics/Computer Science Joint Major (B.Sc. Only)

In addition to Mathematics 1000, 1001, and Computer Science 1710, the following courses numbered 2000 or higher are required:

1. 2710, 2711, 2742, 2760, 3715, 3716, 3719, 3724, 3725, 3754, and 4770.
2. Six additional credit hours in Computer Science courses numbered 3000 or higher.
3. Mathematics 2000, 2050, 2051, Pure Mathematics 2320, Applied Mathematics 2130, Mathematics 3000, Applied Mathematics/Pure Mathematics 3202, Applied Mathematics/Pure Mathematics 3260, Pure Mathematics 3320, 3340, and Statistics 2510.
4. Nine additional credit hours in courses numbered 3000 or higher offered by the Department of Mathematics and Statistics.



### 3.34 Physics/Applied Mathematics and Physics/Chemistry Option Programs

Students who follow the five-year Physics/Applied Mathematics Joint Honours or Physics/Chemistry Joint Honours Programs of courses outlined above either as Honours students or otherwise and who satisfy all relevant course regulations except those on Academic Standing for the Honours Degree of Bachelor of Science shall receive on their University records a notation that they followed the "Physics/Applied Mathematics" or "Physics/Chemistry" Option Programs.

Students who intend to follow a joint degree program are strongly recommended to consult the Head of the Department or delegate at their earliest opportunity to ensure proper planning of their course sequence.

### 3.35 Joint Degrees of Bachelor of Science (Computer Science) and Bachelor of Commerce (Co-operative)

For students registered in a program leading to the degree of Bachelor of Science majoring in Computer Science who are concurrently completing the Bachelor of Commerce (Co-operative) degree, the number of credit hours required to comply with clause 3. a. of the Degree Regulation for the General Degree of Bachelor of Science will be reduced to 69 credit hours. This adjustment will be permitted only for students who are graduating with the Bachelor of Science degree (majoring in Computer Science) and the Bachelor of Commerce (Co-operative) degree at the same convocation. In order to meet all of the requirements of both degree programs at the same time, students who are completing the joint degrees are strongly advised to follow the **Suggested Program of Studies** outlined below, and to seek advice from the Department of Computer Science and the Faculty of Business Administration in order to ensure that their proposed program is possible within the constraints of course scheduling and prerequisites.

**Suggested Program of Studies: Bachelor of Science (Computer Science) and Bachelor of Commerce (Co-operative) Prior to admission to the Bachelor of Commerce (Co-operative) program:**

For the joint degrees of Bachelor of Science majoring in Computer Science and Bachelor of Commerce (Co-operative), students must successfully complete a minimum of 150 credit hours in courses applicable to the degrees. To be eligible for admission to Term 1 of the Bachelor of Commerce (Co-operative) program, an applicant must have successfully completed 30 credit hours with an overall average of at least 65% on the courses comprising those credit hours. For the Joint Degree, the 30 credit hours must comprise:

1. Six credit hours in English courses;
2. Six credit hours in Mathematics courses, which must include Mathematics 1000;
3. Economics 2010 and 2020;
4. Business 1000;
5. Computer Science 1710;
6. Six additional credit hours in Science electives. Following admission to the Joint Program, the curriculum is as set out in the table below.

Please refer to the calendar entry for the Faculty of Business Administration for complete course descriptions, regulations and plan of operation for the Bachelor of Commerce (Co-operative) component of the degree, and to the entry for Computer Science for the Computer Science course descriptions.

Archived Previous Calendar available at  
 Current University Calendar available at  
[mun.ca/university-calendar](http://mun.ca/university-calendar)

**Bachelor of Commerce (Co-operative) Curriculum (Completed Jointly with The Degree of Bachelor of Science with a Major in Computer Science) Table**

Term One (Fall)	Business 1101 Business 1201 Statistics 2500 or Statistics 2510 Computer Science 2710 Computer Science 2742 Business 1600
Term Two (Winter)	Business 2000 Business 2101 Business 2201 Business 2301 Business 2401 Pure Mathematics 2320
Spring	[see Notes 1 and 2 below]
Term Three (Fall)	Business 3320 Business 3401 Business 3700 Computer Science 2711 Computer Science 2760
Work Term I (Winter)	Business 399W [see Note 1 below]
Term Four (Spring)	Business 4000 Business 4320 Business 4401 Business 4500 Economics 3150
Work Term II (Fall)	Business 499W [see Note 1 below]
Term Five (Winter)	Business 5301 Computer Science 3719 Computer Science 3724 Six credit hours of electives [see Note 3 below]
Work Term III (Spring)	Business 599W [see Note 1 below]
Term Six (Fall)	Business 7000 Computer Science 3715 Computer Science 3716 Computer Science 3725 Three credit hours of electives [see Note 3 below]
Term Seven (Winter)	Computer Science 3754 Computer Science 4770 1 Computer Science elective Six credit hours of electives [see Note 3 below]

Notes: 1. Students are advised that, in order to complete the joint degrees within the minimum 150 credit hours, they should be prepared to complete at least three of the courses required for the degree of Bachelor of Science as opportunities arise and as courses are offered. Following Term Two of the program for the Bachelor of Commerce (Co-operative) degree, these courses may be completed during the Spring semester between Terms 2 and 3, or during any of the three Work Terms (for example, in the evening or by distance), or during Terms 3, 4, 5, 6 or 7 (following submission of a course-load waiver).

2. To meet the requirements for the Joint Degree in the minimum number of 150 credit hours, careful planning, particularly in the selection of elective courses as well as in the sequence of Major program courses, is recommended to ensure timely completion. Also note that, in order to meet the Science general regulations, students must have completed courses in at least four areas of Science.

3. Six credit hours must be Business electives and 6 credit hours must be Science electives.

## 4 Waiver of Regulations for Undergraduate Students

Where circumstances warrant, any prerequisite or prerequisites listed in Departmental Regulations may be waived by the Head of the Department. Any Department Regulations may be waived by the appropriate Committee on Undergraduate Studies upon request of the Head of the Department concerned.

## 5 Program Regulations and Course Descriptions

### 5.1 Biochemistry

#### 5.1.1 Programs

The following undergraduate programs are available in the Department:

1. Major or Honours in Biochemistry
2. Major or Honours in Nutrition
3. Major or Honours in Dietetics - Admission to this program is under review. For further information see **Important Note** under Professional Program in Dietetics.
4. Joint Honours in Biochemistry and Cell Biology/Microbiology
5. Joint Honours in Biochemistry and Chemistry
6. Joint Honours in Biochemistry and Physics

7. Joint Honours in Biochemistry (Nutrition)/Psychology (Behavioural Neuroscience)
8. Joint Honours in Biochemistry/Psychology (Behavioural Neuroscience)
9. Minor in Biochemistry
10. Minor in Nutrition

Students who wish to enrol in any of these programs should plan their program well in advance so that they will have taken the appropriate prerequisites. Entry to a number of required courses is limited and will be determined by academic performance. Required courses should be taken in the year indicated by the course numbers so as to avoid timetable clashes and missing prerequisites which could prolong the time necessary to complete the program. Students are advised to consult with the Department at the earliest opportunity.

Candidates for the general and honours degrees in the programs above should refer to the University Regulations for the General and Honours degrees of Bachelor of Science.

Students who intend to pursue graduate studies should take the courses leading to the honours degree.

Note: *Supplementary examinations will be allowed in certain Biochemistry courses which have written final examinations. Students should refer to the Faculty of Science Degree Regulations for details.*

## 5.1.2 Admission to Programs

Students who wish to declare a Major in Biochemistry or Biochemistry (Nutrition) or who wish to apply for Honours standing in any of our programs are strongly recommended to do so by June 30 in any year. Students who do not declare by this date may not be considered for departmental scholarship or other awards.

Note: *For further information see regulations governing admission to Biochemistry (Dietetics).*

## 5.1.3 Biochemistry Program

### 5.1.3.1 Major in Biochemistry

Entry to the Biochemistry Majors program is based on academic standing.

1. To be considered for admission to the program students must have at least 30 credit hours in courses and have successfully completed the following courses (or their equivalents) with a minimum overall average of 60%. In addition, students must be eligible for entry to Chemistry 2400.
    - a. English 1080, 1110 (or equivalent)
    - b. Chemistry 1050, 1051 (or Chemistry 1010, 1011)
    - c. Mathematics 1000, 1001 (or Math 1090, 1000)
    - d. Biology 1001, 1002 or two first-year University level courses in Physics.
  2. Required courses to complete the major:
    - a. Biochemistry 2100, 2101, 3105, 3106, 3107, 3108.
    - b. At least 12 credit hours in courses from Biochemistry 3200, 4002, 4101, 4103, 4104, 4200, 4201.
    - c. Medicine 310A, 310B or 6 credit hours from Biology 2060, 3050, 3401, 3402, 3530, 4200, 4245, 4404, Chemistry 4201
    - d. Biology 1001 and 1002; Mathematics 1001; and Physics 1020 or 1050, and 1051 for those students who did not complete them in first year. Students may also need to complete Physics 1021 in order to fulfil this requirement.
    - e. Chemistry 1031 which is strongly advised to be taken prior to second year for those students who complete Chemistry 1010 and 1011 in first year. see Note 2. below.
    - f. Chemistry 2300, 2400, 2401
    - g. one of Chemistry 3100, Environmental Sciences 3210, Environmental Sciences 3211.
- Notes: 1. *Students are required to complete at least 78 credit hours in Science courses for the General Degree.*  
 2. *Majors who take Chemistry 1010/1011 but not Chemistry 1031 as part of their first year sequence risk waiting a whole year before they can continue taking Biochemistry program courses.*  
 3. *For the purposes of a Biochemistry degree, Medicine 310A and 310B count as Biochemistry courses.*
3. Students are encouraged to choose a minor.

### 5.1.3.2 Honours Degree in Biochemistry

Students normally should apply for an Honours program at the completion of their third year of studies.

1. To be eligible for admission, students must be in Honours standing. To be considered for early admission to an Honours program in Biochemistry at the end of second year, students must have achieved at least 70% in each of Biochemistry 2100 and 2101 and Chemistry 2400, 2401.
2. Required courses:
  - a. Biochemistry 2100, 2101, 3105, 3106, 3107, 3108, 4102, 499A, 499B, Medicine 310A, 310B.
  - b. Biochemistry 4210 or 4211.
  - c. Twelve credit hours in courses from Biochemistry 4002, 4101, 4103, 4104, 4200, 4201.
  - d. At least 6 credit hours in courses from Biochemistry 3200, 3201, 4105, 4220, Biology 2060, 3050, 3530, 4200, 4245, 4404, Chemistry 4201.
  - e. Biology 1001 and 1002; Mathematics 1001; and Physics 1020 or 1050, and 1051 for those students who did not complete them in first year. Students may also need to complete Physics 1021 in order to fulfil this requirement.
  - f. Chemistry 1031 which is strongly advised to be taken prior to second year for those students who complete Chemistry 1010 and 1011 in first year (see **Note** below).
  - g. Chemistry 2300, 2400, 2401, one of 3410 or 3411.
  - h. One of Chemistry 3100, Chemistry 3500, Environmental Sciences 3210, Environmental Sciences 3211.
  - i. Statistics 2550 or equivalent.

Note: *Majors who take Chemistry 1010/1011 but not Chemistry 1031 as part of their first year sequence risk waiting a whole year before they can continue taking Biochemistry program courses.*

3. Students are encouraged to choose a minor.

Those courses in which a grade "B" or an average of 75% or higher are required, as specified in clause 6. a. of the Regulations for the Honours Degree of Bachelor of Science, are 45 credit hours in Biochemistry courses and 15 credit hours in other courses (beyond the 1000-level) chosen from Biochemistry, Biology, or Chemistry. Biochemistry 2010, 2011, Biology 2040, 2041 and Chemistry 2600, 2601 may not be used to meet this requirement. Medicine 310A/B counts as Biochemistry for these 60 credit hours.

### 5.1.3.3 Minor in Biochemistry

Students who take a minor in Biochemistry will complete:

1. Biochemistry 2101, 3106
2. Either Biochemistry 2100 or Biology 2250
3. nine credit hours from Biochemistry 3105, 3107, 3108, 4002, 4101, 4103, 4104, 4200, 4201; or 6 credit hours from these Biochemistry courses and 3 credit hours from Chemistry 4201, Biology 2060, 3050.
4. Either Chemistry 2400, 2401 or Chemistry 2440 and 3 additional credit hours from the Biochemistry courses listed in 3. above.

Course prerequisites stipulated in the course descriptions shall apply to a minor in Biochemistry.

## 5.1.4 Nutrition Program

### 5.1.4.1 Major in Nutrition

Entry to the Nutrition majors program is based on academic standing.

1. To be considered for admission to the program students must have at least 30 credit hours in courses and have successfully completed the following courses (or their equivalents) with a minimum overall average of 60%.
  - a. English 1080, 1110 (or equivalent)
  - b. Chemistry 1050, 1051 (or Chemistry 1010, 1011)
  - c. Mathematics 1090, 1000 (or Mathematics 1000 and one elective)
  - d. Biology 1001, 1002 or two first-year University level courses in Physics.
2. Required courses to complete the major:
  - a. Biochemistry 2000, 2100, 2101, 3054, 3106, 3200, 3201, 3202, 3402, 4300, 4301, Medicine 310A, 310B.
  - b. One of Biochemistry 3107, 3108, 4002,
  - c. Biology 1001 and 1002; and Physics 1020 and 1021 (or equivalent), for those students who did not complete them in first year.
  - d. Chemistry 2400, 2401, or Chemistry 2440.
  - e. Statistics 2550 or equivalent.
3. Students are encouraged to choose a minor.

Notes: 1. Students are required to complete at least 78 credit hours in Science courses for the General Degree.

2. Students who choose to complete Chemistry 2400/2401 are advised to take the appropriate prerequisites for those courses.

3. For the purposes of a Biochemistry (Nutrition) degree, Medicine 310A and 310B count as Biochemistry courses.

### 5.1.4.2 Honours Degree in Nutrition

Students normally should apply for an Honours program at the completion of their third year of studies.

1. To be eligible for admission, students must be in Honours standing. To be considered for early admission to an Honours program in Nutrition at the end of second year, students must have achieved at least 70% in each of their required 2000 level Biochemistry and Chemistry courses.
2. In addition to the courses required for the general degree, the program shall include:
  - a. Biochemistry 3107, 4002, 4502.
  - b. Six additional credit hours chosen from Biochemistry 3105, 3108, 4101, 4103, 4104, 4105, 4200, 4201, 4210, 4211, 4220, 4400.
  - c. Either Biochemistry 499A/B, or 4999 plus an additional 3 credit hours 4000 level Biochemistry course.
3. Those courses in which the grades specified in clause 6. a. of the Regulations for the Honours Degree of Bachelor of Science are 60 credit hours in Biochemistry courses.

### 5.1.4.3 Minor in Nutrition

Students who take a minor in Nutrition will complete:

1. Biochemistry 2101, 3106, 3200, 3201, Medicine 310A, 310B.
2. Six credit hours chosen from Biochemistry 3202, 4300, 4301.

Course prerequisites stipulated in the course descriptions shall apply to a minor in Nutrition. In particular, students should note that one of Chemistry 2440 or Chemistry 2401 are required as co-requisites or prerequisites to several courses.

## 5.1.5 Professional Program in Dietetics

For professional qualification as a dietitian, students are required to complete the degree in Dietetics, followed by an approved Dietetic Internship.

Important Note: There will be a competition for admission to the Dietetics program for the 2006-07 academic year. Applications must be received in the Biochemistry Office by April 30, 2006. Further admissions beyond the 2006-07 academic year depend on an academic program review.

### 5.1.5.1 Admission to Dietetics

All applications for entry to the program for the Bachelor of Science in Dietetics must be submitted to the Head of the Department of Biochemistry by April 30 in any year.

Entrance to the program in Dietetics is on the basis of competition for a fixed number of places. The Admission Committee takes into account the applicant's academic background and information on an applicant's personal qualities and achievements as given by the applicant and by referees' reports.

1. To be eligible for consideration, an applicant must have completed a minimum of 30 credit hours in courses which have been taken

or accepted for credit at a recognized university or university college before entry to the Dietetics program.

2. Students applying to enter are required to have successfully completed the following courses or their equivalents:
  - a. Chemistry 1010, 1011 (or Chemistry 1050, 1051)
  - b. English 1080, 1110 (or equivalent)
  - c. Mathematics 1090, 1000 (or Mathematics 1000 and one elective)
  - d. Physics 1020 and 1021 (or Physics 1050 and 1051).
  - e. either Biology 1001 and 1002 or Psychology 1000 and 1001
3. No application will be considered from an applicant who cannot produce evidence that the above requirements have been met or will have been met by the time of entry into the Dietetics program.
4. After admission, the program will consist of two years of study at this University and a final year at Acadia University. The number of seats available at Acadia University is limited. When a student is accepted into the Dietetics program at Memorial University of Newfoundland, the year that student is expected to attend Acadia University will be set. No guarantee of space will be available in other years.

#### 5.1.5.2 Registration and Promotion

The following regulations apply to the program courses taken at Memorial University of Newfoundland.

1. Biochemistry and Chemistry courses shall be taken in the program year indicated by the course number. Biology 1001 and 1002 must be completed by the end of the second year of the program. The remaining courses are to be scheduled so that the course load is five in each semester. Exceptions to this prescribed program, including specified course load, must have the approval of the Committee on Undergraduate Studies of the department. Students who have completed program courses in advance of admission to the program may arrange with the Committee a reduction in the required course load.
2. For promotion from each term the requirements are: the achievement of a passing grade in all courses; an overall average of at least 60% in those courses required in each academic term; and completion of the appropriate course load as outlined above.
3. Students who fail to achieve the standards outlined in the paragraph above will be required to withdraw from the program. They may be considered for readmission at which time they will normally be required to repeat the courses in which they failed, and/or to repeat courses which will raise the average to 60%, unless, in the opinion of the Head, a more meaningful course of study would be appropriate.
4. In order to be considered for readmission, students must formally apply for readmission to the program not later than the deadline date specified in the first paragraph of the Admission section of this program.

#### 5.1.5.3 Major in Dietetics

##### 1. Required courses at Memorial University of Newfoundland:

- a. Biochemistry 2000, 2010, 2011, 2100, 2101, 3054, 3106, 3200, 3201, 3202, Medicine 310A, 310B.
- b. Biology 1001, 1002 (if not taken in first year).
- c. Business 1000 and 2000.
- d. Chemistry 2440 (or Chemistry 2400, 2401)
- e. Statistics 2550 or equivalent.
- f. Six credit hours in social science courses if Psychology 1000 and 1001 were not taken in first year.
- g. Three credit hours in Computer Science.

Note: Students who choose to complete Chemistry 2400/2401 are advised to take the appropriate prerequisites for those courses.

The above courses must be completed before the year at Acadia University for both the General and the Honours Programs.

##### 2. Required courses at Acadia University:

The equivalent of at least 18 senior level credit hours in nutrition and/or foods must be successfully completed at Acadia University. Courses to make up these credit hours are to be selected in consultation with faculty advisors at Memorial University of Newfoundland and Acadia University.

Note: 120 credit hours in courses must be obtained for the General Degree of Bachelor of Science (refer to Regulations for the General Degree of Bachelor of Science, Clause 1.

#### 5.1.5.4 Honours Degree in Dietetics

Students normally should apply for an Honours program at the completion of their third year of studies. To be eligible for admission, students must be in Honours standing.

In addition to the courses required for the general degree, the program shall include: Either Biochemistry 499A/B or Biochemistry 4999 plus 3 additional credit hours in Nutrition at Memorial University of Newfoundland or Acadia University at the 4000 level.

The 60 credit hours in courses from clause 6. a. of the Regulations for the Honours degree of Bachelor of Science are the required Biochemistry in the program outlined above and the Nutrition and Foods courses at Acadia University.

### 5.1.6 Course List

In accordance with Senate's *Policy Regarding Inactive Courses*, the course descriptions for courses which have not been offered in the previous three academic years and which are not scheduled to be offered in the current academic year have been removed from the following listing. For information about any of these inactive courses, please contact the Head of the Department.

**1430 Biochemistry for Nurses** is an introduction to the chemistry and structure-function relationships of carbohydrates, lipids and proteins. It will examine the basic metabolism of carbohydrates and fats, with emphasis on the biochemical fluctuations that occur in human health and disease, and will include a brief introduction to molecular genetics. This course may not be used for credit to fulfil the requirements for a major in the Department of Biochemistry. Entry into this course is restricted to students in the BN (Collaborative) Program. Prospective fast-track program students should

consult with the School of Nursing concerning admission to this course.  
Prerequisite: Level 3 Chemistry or Chemistry 1010 or Chemistry 1810 or equivalent.

Lectures: Four hours per week

Note: Credit may be obtained for only one of Biochemistry 1430 and the former 2430.

**2000 Principles of Food Science** enables one to gain an understanding of the scope of Food Science as a discipline. Topics include introductions to chemistry, processing, analysis, microbiology, packaging, product development, sensory evaluation and quality control as they are related to Food Science.

Prerequisite: Chemistry 2400 or 2440.

Lectures: Three hours per week.

Laboratory: One period per week.

**2010 Introductory Foods I** is an introduction to the science of food and food preparation. Topics covered include fats and oils, simple and complex

carbohydrates, fruits and vegetables, cereals and starches. Laboratory work applies scientific principles and theories to practical problems in food preparation.

Prerequisite: Chemistry 1011 or 1051.

Lectures: Three hours per week.

Laboratory: Three hours per week.

**2011 Introductory Foods II** is an introduction to the science of food and food preparation. Topics covered include proteins - dairy products, eggs, meats and fish, legumes, gelatin and flour proteins, batters and doughs, meal management and menu planning. Laboratory work applies scientific principles and theories to practical problems of food preparation.

Prerequisite: Chemistry 1011 or 1051; Biochemistry 2010.

Lectures: Three hours per week.

Laboratory: Three hours per week.

**2100 Introduction to Molecular Biology and Genetics** will cover the heritability of simple traits from phenotype to genotype; the discovery of DNA as the molecule of heredity; the structure and function of DNA; the elucidation of the genetic code; and the manipulation of DNA for recombinant DNA technology and biotechnology.

Prerequisites or co-requisites: Biochemistry 2101, Chemistry 2401, Physics 1021 or 1051. Students may replace the co-requisite Chemistry 2401 with Chemistry 2440 as a prerequisite. Chemistry 2440 may **not** be taken as a co-requisite of 2100.

Lectures: Three hours per week.

Laboratory: Three hours on alternate weeks.

**2101 Introduction to Biochemistry** is an introduction to the major organic substances of living organisms, proteins, carbohydrates and lipids: their structure, analysis and biochemical function. Other topics will include: enzymes; the biochemistry of membranes, including the plasma membrane and specialized intracellular membranes; and the biochemistry of selected differentiated cells.

Prerequisites: Chemistry 2400, 2401, or Chemistry 2440; and Physics 1020 or 1050, and 1021 (or 1051). Chemistry 2401 and Physics 1021 or 1051 can be done concurrently.

Lectures: Three hours per week.

Laboratory: One three-hour laboratory period on alternate weeks to illustrate concepts covered in the lectures.

Note: *Credit may be obtained for only one of 2101, Pharmacy 2004, or Pharmacy 3110.*

**2600 Introduction to Human Nutrition** (same as HKR 2600) gives an overview of human nutrition with an emphasis on topics of current interest. Students will gain an understanding of nutrition in the context of health maintenance across the life span. Topics covered will include nutrition during pregnancy, nutrition for infants, Canadian Recommended Nutrient Intakes / Dietary Reference Intakes, weight loss and weight gain, nutraceuticals and ergogenic aids.

Notes: 1. *Credit can be received for only one of Biochemistry 2600, the former Kinesiology 2600, or HKR 2600.*

2. *Students who have completed Biochemistry 3200 or 3201 may not subsequently receive credit for Biochemistry 2600.*

3. *Students may not count Biochemistry 2600 among the 60 credit hours in Biochemistry courses required for Honours in Biochemistry, Honours in Nutrition, or Honours in Dietetics.*

**3052 Food Microbiology** - inactive course.

**3054 Fundamentals of Food Microbiology** is an introduction to the basic principles of microbiology with an emphasis on the study of microorganisms that are found in foods. The role of microbes in food and food spoilage, and the role of food-borne pathogens in human illness and disease will each be discussed. Nutritional aspects of food-borne microorganisms will also be studied.

Lectures: Three hours per week.

Prerequisites: Biology 1002 and Biochemistry 2101.

Note: *Credit can only be received for only one of Biochemistry 3052, 3054, Biology 3052, and the former Biochemistry 3401.*

**3105 Physical Biochemistry** examines topics such as: types of intermolecular forces in biomolecules; the folding of biomolecules and the role of water; pH, buffers, and ionisation of biomolecules; thermodynamics: equilibria, coupled reactions, transport across membranes and redox reactions; and ligand binding. Other topics will include: size and shape of biomolecules; isotopes in biochemistry; and, spectroscopy of biomolecules.

Prerequisites: Biochemistry 2101; and Chemistry 2300 or Physics 2053.

Lectures: Three hours per week and a two hour problem-solving class.

**3106 Metabolism** examines the catabolism of carbohydrates, lipids and amino acids. Other topics will be: mitochondria, chloroplasts and ATP synthesis; biosynthesis of carbohydrates and lipids; metabolic specialization of differentiated cells and tissues; and, integration of metabolism.

Prerequisite: Biochemistry 2101.

Lectures: Three hours per week.

Practical classes: One three-hour laboratory or one-hour tutorial per week.

Note: *Credit may be obtained for only one of Biochemistry 3106, the former Biochemistry 3102 or Pharmacy 3111.*

**3107 Nucleic Acid Biochemistry and Molecular Biology** examines the structure, function and biochemistry of DNA and RNA and the biochemical processes in the flow of information from the gene to protein. These will include: DNA replication, recombination and repair processes; transcription of RNA and RNA splicing; and protein synthesis. The regulation of gene

expression will also be covered at an introductory level. The course will also include an introduction to cloning methodology.

Prerequisite: Biochemistry 2101; and Biochemistry 2100 or Biology 2250.

Lectures: Three hours per week.

Laboratory: Up to four hours per week which will normally consist of one three hour laboratory period plus one additional hour on the following day.

**3108 Molecular Biochemistry of the Cell** focuses on the molecular biochemistry of intracellular regulation, including advances in topics such as signal transduction, apoptosis and cancer. Other topics will include protein processing and sorting, cyclins, G-protein structure, function and regulation, cell adhesion molecules and the structure of the extracellular matrix.

Lectures: Three hours per week.

Prerequisites: Biochemistry 2100 or Biology 2250; and Biochemistry 2101.

**311A/B Human Physiology** (same as Medicine 310A/B) covers the properties of nerve and muscle cells, the special senses, blood and body fluids, and the nervous, cardiovascular, digestive, immune, respiratory, urinary, endocrine and reproductive systems. Integration of the body's systems in maintaining homeostasis is emphasized. Priority for entry into this course is given to Biochemistry, Nutrition, Dietetics, and other students who are interested in experimental science.

Prerequisite or Co-requisite: Biochemistry 2101.

Lectures: Three hours per week.

Laboratory: To be specified.

Note: *Credit may be obtained for only one of Biochemistry 311A/B or Medicine 310A/B.*

**3200 Basic Human Nutrition I** studies the nutrients essential to human health and well-being with emphasis on carbohydrates, proteins and lipids, - chemistry, dietary source, dietary requirements, metabolism, and physiological importance.

Prerequisite or Co-requisite: Biochemistry 2101 or Pharmacy 2004 or Pharmacy 3110.

Lectures: Three hours per week

**3201 Basic Human Nutrition II** studies the vitamins, minerals and trace elements essential to human health and well-being - chemistry, dietary source, dietary requirements, physiological role, and deficiency syndromes.

Co-requisite or prerequisite: Biochemistry 3106 or Pharmacy 3111.

Lectures: Three hours per week

**3202 Community Nutrition** examines nutritional assessment, nutrition education, and the role of community agencies and individuals in the dissemination of nutritional information. Survey methods and results will be discussed.

Co-requisites or prerequisites: Biochemistry 3201, and either Biochemistry 311B or Medicine 310B.

Prerequisite: Biochemistry 3200.

Lectures: Three hours per week.

Note: *Credit may be obtained for only one of Biochemistry 3202 and the former Biochemistry 4302.*

**3402 Food Chemistry** examines the following topics: water structure and the role of water in chemical reactions and mechanical properties of foods; chemistry and physical properties of carbohydrates, proteins and lipids; food dispersions; pigments and natural colorants; food flavour; enzyme properties and applications; vitamins and minerals; chemistry of enzymic and non-enzymic browning; characteristics of: muscle tissue, milk, eggs, bread and edible plant tissue; food additives; and, chemical changes in foods during processing.

Prerequisites: Biochemistry 2000 and Biochemistry 2101.

Lectures: Three hours per week.

Laboratory: One period per week.

**4002 Biochemical Regulation** examines metabolic regulation at the cellular and multicellular level. Topics will include: control theory; hormones: their biosynthesis and mechanism of action; signal transduction; and, endocrine coordination of metabolic processes. Principles will be illustrated by the use of case studies from the medical and veterinary literature.

Prerequisites: Biochemistry 2100 or Biology 2250; Biochemistry 3106.

Lectures: Two to three hours per week, together with assigned reading and case studies.

**4101 Proteins** will review the history of protein research and the general properties of proteins and include other topics such as: strategy and methods for purification; chemical structure, properties, modification and determination of the protein amino acids; sequencing strategy, chain cleavage methods and end group analysis; folding of the protein main chain and techniques to determine structure; and, the relationship between structure and function: protein filaments, motors and regulators. It will also cover disease-related proteins and other examples from the current literature.

Prerequisite: Biochemistry 3105.

Lectures: Two to three hours per week and assigned reading.

**4102 Current Topics in Biochemistry** is a seminar course in which faculty and students will discuss topics of current interest in the biochemical literature. Students will be responsible for reading and critically assessing recent literature.

Prerequisites: Admission to this course is restricted to Honours Biochemistry students in their final year or by permission of the Head.

**4103 Prokaryotic Gene Regulation** is a detailed and up-to-date treatment of the mechanisms of genetic regulation found in bacterial cells. The course will develop topics based on the evidence of bacterial genetics and modern

molecular biological experiments. Topics may include: theory of mutations, RNA transcription, positive and negative regulation of transcription; regulation of protein synthesis; control of DNA replication; bacterial operons and regulons; developmental molecular biology in bacterial systems; and evolution and molecular biology of organelles.

Prerequisite: Biochemistry 3107.

Lectures: Three hours per week.

**4104 Eukaryotic Gene Regulation and Developmental Biology** details the cellular and molecular aspects of eukaryotic gene regulation and development. Topics to be covered will include the DNA content and organization of eukaryotes, mechanisms controlling the expression of eukaryotic genetic information at the transcriptional and post-transcriptional levels, and the methodologies used to define these mechanisms. Detailed consideration will be given to the cell-surface events which regulate nuclear gene expression and cell lineage specification. Developmental mechanisms operating in a number of model systems will be discussed.

Prerequisite: Biochemistry 3107 or 3108.

Lectures: Three hours per week.

**4105 Immunology** (same as Pharmacy 4105) is taught and administered by the School of Pharmacy. The course is an introduction to the molecular and cellular basis of immunity and hypersensitivity, and will include a discussion of the manipulation of the immune system in the management and treatment of disease.

Lectures/Tutorials: Three per week.

Co-Requisites or prerequisites: Biochemistry 2101, and either Biochemistry 311B or Medicine 310B.

Note: *Credit may be obtained for only one of Biochemistry 4105, Pharmacy 4105 and the former Pharmacy 3105.*

**4200 Bioenergetics and Biological Oxidation** examines topics such as: respiration and electron transport; the functional organization of energy transducing membranes; the structure and function of flavoenzymes, cytochromes, iron-sulfur proteins and quinones; enzyme reduction of oxygen; and, free radicals in biological systems.

Prerequisite: Biochemistry 3106.

Lectures: Two to three hours per week and assigned reading.

**4201 Membranes - Structure and Function** examines the structure of model and biological membranes, the molecular interactions between membrane components and the effects of these interactions on the biophysical and functional properties of membranes. Other topics will include the structure-function of specialized membranous systems, such as lipoprotein, lung surfactant, and lipid rafts; membrane lipid composition in biochemical adaptation and function; and the role of membrane proteins in intracellular trafficking, receptor function, enzymatic activity and membrane-related diseases.

Prerequisite: Biochemistry 3105.

**4210 Biochemical Research Techniques I** is designed to familiarize students with methods used for the study of structural and molecular biology.

Prerequisites: Biochemistry 3105, 3107.

Lectures and laboratory periods: times as arranged.

*Attendance is required.*

**4211 Biochemical Research Techniques II** is designed to familiarize students with methods used for the study of cellular and subcellular metabolism. This course may include a research project.

Prerequisite: Biochemistry 3106.

Lectures and laboratory periods: times as arranged.

*Attendance is required.*

## 5.2 Biology

### 5.2.1 Programs in Biology

The following undergraduate programs are available in the Department:

1. Major or Honours in Biology
2. Joint Honours in Biology and Earth Sciences (Geology)
3. Joint Honours in Biology and Psychology
4. Joint Honours in Biology and Psychology (Behavioural Neuroscience)
5. Joint Honours in Biology and Statistics
6. Joint Honours in Cell Biology and Biochemistry
7. Minor in Biology

Details of joint programs are given after the **Regulations for the Honours Degree of Bachelor of Science**.

### 5.2.2 Entrance Requirements

Entry to the Biology Majors Program is competitive and based on academic standing.

To be considered for admission to the program students must have completed Biology 1001/1002 with an average of at least 65%. In addition, applicants will normally have completed the following courses (or their equivalents) and must have a minimum overall average of 60% in these courses.

1. English 1080, 1110 or equivalent
2. Mathematics 1090 and Mathematics 1000 (or Mathematics 1000 only)
3. Chemistry 1010/1011 or Chemistry 1050/1051 or Physics 1020/1021 or Physics 1050/1051

**4220 Introduction to General and Autonomic Pharmacology** (same as Medicine 4300) deals with the general principles of pharmacology (dose-response relationship, drug-receptor interaction, absorption, distribution, metabolism, excretion of drugs), and drugs that affect neuromuscular and autonomic neurotransmission, the cardiovascular, gastrointestinal, and central nervous systems, and autacoids/prostanoids.

Prerequisites: Biochemistry 311A/B or Medicine 310A/B or Pharmacy 2002/2003 (or Pharmacy 3201/3202).

Co-requisites: Biochemistry 3106 or Pharmacy 3111.

Lectures: Three hours per week.

Laboratory: Three hours per week.

Note: *Credit may be obtained for only one of Biochemistry 4220 or Medicine 4300.*

**4300 Advanced Nutrition** is a course in which current controversies and trends in human nutrition are presented and discussed using the scientific literature.

Prerequisites: Biochemistry 3200, 3201, and either Biochemistry 311B or Medicine 310B.

Lectures: Three hours per week.

**4301 Nutrition and Disease** is a course which addresses the scientific basis for nutritional intervention in chronic human disease.

Prerequisites: Biochemistry 3200, 3201, and either Biochemistry 311B or Medicine 310B.

Lectures: Three hours per week.

**4400 Food Analysis** - inactive course.

**4502 Techniques in Nutrition Research** is a seminar course in which faculty and students will discuss concepts and methods used in the study of nutrition. Students will be responsible for reading and critically assessing recent literature.

Prerequisite: Biochemistry 4301.

Admission to this course is restricted to Honours Nutrition students in their final year or by permission of the head.

**499A and 499B Dissertation** is a two-semester linked course (6 credit hours) based on independent study of a problem in Biochemistry. The subject of study will be decided in consultation with Faculty advisors and must be approved in advance by the Department, or both Departments in the case of a Joint Honours degree. This dissertation is obligatory for Honours students in Biochemistry. The dissertation will be submitted as a formal written report accompanied by appropriate illustration before the end of the tenth week of the second semester. Before the end of his/her final semester the student will give an oral presentation of his/her research. Admission to this course is restricted to Honours students in their final year or by permission of the Head.

Note: *Credit may be obtained for only one of Biochemistry 499B or Biochemistry 4999.*

**4999 Dissertation** is a three-credit hour dissertation for Honours students in Dietetics and Nutrition. The dissertation will be based on independent study of a problem in Dietetics or Nutrition. The subject of study will be decided in consultation with Faculty advisors and must be approved in advance by the Department. The dissertation will be submitted as a formal written report accompanied by appropriate illustrations before the end of the semester. Admission to this course is restricted to Honours students in their final year or by permission of the Head.

Note: *Credit may be obtained for only one of Biochemistry 499B or Biochemistry 4999.*

4. If Mathematics 1000 taken, any one other first year course.

Chemistry 1010/1011 (or 1050/1051) should be taken in the first year, as it is a prerequisite for other required courses in the Biology program, and delaying chemistry until second year may make it difficult to complete the program in the normal eight semesters.

### 5.2.3 Minor in Biology

A minor in Biology will consist of 24 credit hours in Biology courses: 1001 and 1002 (or equivalent) plus any 18 credit hours chosen from the list of Biology courses except 2040, 2041 and 2120. The choice of courses must be made in consultation with the Head of Biology or delegate and it is recommended (but not required) that students take at least two Biology courses at the 3000 level or above

### 5.2.4 General Degree - Major in Biology

Each Biology Major is assigned a faculty advisor who should be consulted on academic problems, including course selection. All students majoring in Biology are required to complete a minimum of 45 credit hours in courses from the Biology Department offering. Those 45 credit hours must include Biology 1001/1002 or their equivalents, the 15 credit hours in core courses listed below, and 24 credit hours in biology electives.

Biology Core (15 credit hours): Biology 2060, 2250, 2600, 2900, plus one of Biology 3401, 3402, 4245 and 4404.

All majors must also successfully complete the following courses or their equivalents:

1. English 1080 and 1110 (or equivalent)
2. Physics 1020/1021 (or 1050/1051)
3. Mathematics 1000
4. Chemistry 1010/1011 (or 1050/1051), 2440
5. Statistics 2550
6. Biochemistry 2101 and 3106
7. Extra Science courses as necessary to fulfil the requirement for 78 credit hours in Science as stipulated in Clause 3. a. of the **Regulations for the General Degree of Bachelor of Science**.

It is recommended, but not required, that a Computer Science course be included and the Biology Department strongly recommends Computer Science 2650.

Note: *To minimize timetabling problems, students on the St. John's campus are advised to take Biology 2250 and 2600 in their third semester (Fall), and 2060 and 2900 in their fourth semester (Winter).*

### 5.2.5 Honours Degrees

The attention of students wishing to take Honours is called to those sections of the Calendar dealing with Regulations for the Degree of Bachelor of Science (Honours).

Sixty-nine credit hours in courses, including the 6 first year credit hours and the 15 required core credit hours outlined in the regulations for the General Degree, and the Honours Dissertation (Biology 499A/499B), shall be taken from the Department of Biology offering. Students may elect to complete an Honours Program in Biology or in one of the joint Honours Programs listed under the heading "Programs in Biology". Programs of students taking Honours shall be drawn up in consultation with the student's supervisor, and must be approved by the Head of the Department (or his/her delegate) in accordance with Regulation 1. b. of the **Regulations for the Honours Degree of Bachelor of Science**.

Note: *Some Graduate Courses may be taken in the final year of the Honours Program with the permission of the Head of the Department and the course instructor.*

A dissertation (6 credit hours) is to be presented on some original piece of work undertaken by the candidate, under the guidance of a faculty member of the department, as appointed by the Head of Department. For students electing to take one of the Joint Honours Programs, the dissertation shall be on a topic representative of the selected program. The Department of Biology considers the dissertation to be an important part of the Honours Program.

The dissertation will be based on a 6 credit hours course (Biology 499A/499B). It will involve directed reading relevant to the dissertation topic, preparation of a dissertation outline, supervised research, data synthesis and interpretation, and preparation and defence of the dissertation.

Two typed copies of the dissertation, complete with figures and tables, are to be submitted not less than two weeks before the end of lectures in the semester in which the candidate is registered for Biology 499B. These copies must be submitted to the Head of Department, and must have met the prior approval of the candidate's Honours supervisor.

Before the last day for examinations in the semester, the candidate will be examined orally on the contents of the dissertation. The examining committee shall consist of the Head of the Department, or delegate, the candidate's supervisor, and an examiner appointed by the Head of the Department in consultation with the candidate's supervisor.

### 5.2.6 Honours in Biology

Students seeking the Honours Degree in Biology must satisfactorily complete Biology 1001/1002 (or equivalents) and the 15 credit hours of core Biology courses. The remaining 48 credit hours in Biology courses, which must include the dissertation (499A/499B), may be taken as electives from the Biology offering, on the advice of the supervisor. Additional courses from other departments required for the Honours Degree in Biology include those given for the Major in Biology Program as outlined above.

An Honours degree in Biology may comprise a broadly based selection of courses according to the students interests, or it may be more narrowly focused. An Honours student may focus on any area of Biology where an appropriate supervisor can be found. All Honours students should choose courses in consultation with their supervisors, but it is particularly important that students wishing to focus within the Honours degree should discuss course selection with an Honours supervisor within their area of interest.

As a guide to course selection a number of foci are set out below with some appropriate courses. Note that students are not limited to these areas but may focus their programs wherever they wish provided that (i) an appropriate supervisor is available, (ii) consultation with that supervisor takes place, and (iii) the resources of the Department, as determined by the Head of Department, are appropriate and adequate. Area of focus will not be indicated on the students' transcript.

#### Focus in Marine Biology

Students wishing to focus on marine biology in their Biology Honours program must fulfil all the requirements for an Honours degree in Biology as set out above. The following courses are recommended for this area of interest: Biology 2010, 2122, 2210, 3050, 3295, 3620, 3709, 3710, 3711, 3712, 4012, 4360, 4505, 4510, 4600, 4601, 4605, 4701, 4750, 4810. (Note: this list is only advisory; these are not



required courses).

### Focus in Cell/Molecular Biology

Students wishing to focus on cell biology/molecular biology in their Biology Honours program must fulfil all the requirements for an Honours degree in Biology as set out above. The following courses are recommended for this area of interest: Biology 3050, either 3401 or 3402, 3500, 3530, 3540, 3620, 4000, 4040, 4241, 4245, 4402, 4404, 4605. (Note: this list is only advisory; these are not required courses).

### Focus in Ecology - Evolution

Students wishing to focus on ecology and/or evolution in their Biology Honours program must fulfil all the requirements for an Honours degree in Biology as set out above. The following courses are recommended for this area of interest: Biology 3041, 3050, 3295, 3610, 3620, 3709, 3710, 3711, 3712, 3714, 4040, 4150, 4306, 4360, 4504, 4605; either 4810 or 4820. (Note: this list is only advisory; these are not required courses).

## 5.2.7 Course List

In accordance with Senate's *Policy Regarding Inactive Courses*, the course descriptions for courses which have not been offered in the previous three academic years and which are not scheduled to be offered in the current academic year have been removed from the following listing. For information about any of these inactive courses, please contact the Head of the Department.

Notes: 1. *Students may obtain credit for only 6 1000-level credit hours in Biology. Normally, these courses will be Biology 1001-1002, which are prerequisite to all higher courses in Biology, except where noted below.*

2. *According to the nature of particular courses, the specified number of laboratory hours may consist of some combination of laboratory work, seminars or directed independent study relevant to the practical aspects of the subject matter.*

**1001-1002 Principles of Biology** is an introduction to the science of Biology, including a discussion of the unity, diversity and evolution of living organisms.

Three hours of lecture and a three-hour laboratory per week.

Note: *Biology 1001 is a prerequisite for Biology 1002.*

**2010 Biology of Plants** is a study of the structure, function and reproductive biology of plants, with emphasis on the vascular plants, and on their relationship to environment and human activities.

Three hours of lecture and a three-hour laboratory per week.

Prerequisites: Biology 1001 and 1002; Chemistry 1010 or 1050 (or 1000).

**2040 Modern Biology and Human Society I** examines various aspects of the human body, and the implications of modern biological research for human beings. Topics include cancer; diet and nutrition and associated diseases; circulatory disease, immunity, human genetics, biorhythms, new diseases, genetic engineering and reproductive engineering.

Three hours of lectures/seminars per week.

Note: *Biology 2040 is not acceptable as one of the required courses for the Minor, Major or Honours programs in Biology. There are no prerequisites for this course.*

**2041 Modern Biology and Human Society II** examines the origins and consequences of the environmental crisis of the 20th century. Topics include the population explosion, energy, material cycles, air and water and land pollution, global food supplies, the fisheries, wildlands, renewable and non-renewable resources, environmental ethics.

Three hours of lecture/seminar per week.

Note: *Biology 2041 is not acceptable as one of the required courses for the Minor, Major or Honours programs in Biology. There are no prerequisites for this course.*

**2060 Principles of Cell Biology** is a modern view of the biology of eukaryotic cells, organelles and molecules and their interactions in the functioning of living organisms.

Three hours of lecture and three hours of laboratory per week.

Prerequisites: Biology 1001, 1002 and 2250; Chemistry 2440 or 2400

Prerequisites or co-requisites: Physics 1021 or 1051; Biochemistry 2101

Note: *Credit may not be obtained for both Biology 2060 and the former Biology 3060.*

**2120 Biology for Students of Earth Sciences** is an introduction of the principles of Biology for students in Earth Sciences. Topics will include principles of classification, levels of biological organization, fundamental characteristics of living organisms and basic concepts in ecology.

Three hours of lecture and three hours of laboratory per week.

Prerequisites: Earth Science major; Earth Sciences 1001 or 1002 or permission of the Head of Department.

Notes: 1. *Entry to this course is restricted to Earth Sciences majors, or by permission of the Head of Department.*

2. *This course may not be used for credit by Biology Majors or Minors.*

3. *Credit may not be obtained for both Biology 2120 and either of Biology 1001 or 1002.*

**2122 Biology of Invertebrates** is a study of the invertebrates with emphasis on structure and function, adaptations and life histories. The laboratories will present a broad survey of the major invertebrate groups.

Three hours of lecture and three hours of laboratory per week.

Prerequisites: Biology 1001 and 1002.

Note: *Credit may not be obtained for both Biology 2122 and the former*

*Biology 3122.*

**2210 Biology of Vertebrates** is a study of the vertebrates, with emphasis on structure and function, adaptations and life histories.

Three hours of lecture and three hours of laboratory per week.

Prerequisites: Biology 1001 and 1002.

Note: *Credit may not be obtained for both Biology 2210 and the former Biology 3210.*

**2250 Principles of Genetics** is an introduction to Mendelian and molecular genetics. Phenotype and genotype, behaviour of alleles in genetic crosses, chromosome theory of inheritance, genetic linkage, molecular biology of DNA, RNA and protein, molecular basis of mutation, recombinant DNA, applications of genetic biotechnology.

Three hours of lecture and three hours of laboratory per week.

Prerequisites: Biology 1001 and 1002; Chemistry 1010 and 1011 (or 1050/1051).

Prerequisites or co-requisites: Chemistry 2440 or 2400.

Note: *Credit may not be obtained for both Biology 2250 and the former Biology 3250.*

**2600 Principles of Ecology** is a conceptual course introducing the principles of ecology, including theoretical, functional and empirical approaches.

Three hours of lecture and three hours of laboratory per week.

Prerequisites: Biology 1001 and 1002.

Note: *Credit may not be obtained for both Biology 2600 and the former Biology 3600.*

**2900 Principles of Evolution and Systematics** is an introduction to the processes and patterns of evolution, and the principles of classification. Natural selection and other microevolutionary processes, variation and adaptation, species and speciation, phylogenetic systematics, reconstruction of phylogeny, macro-evolutionary patterns in the fossil record and their interpretation.

Three hours of lecture and three hours of laboratory per week.

Prerequisites: Biology 1001, 1002 and 2250.

Prerequisite or co-requisite: Statistics 2550 (or equivalent)

Note: *Credit may not be obtained for both Biology 2900 and the former Biology 3900.*

**3041 Boreal Flora** covers the identification of the terrestrial vascular plants of Newfoundland and Labrador. Various aspects of floral biology, and the use of dichotomous keys will also be covered.

Three hours of lecture and three hours of laboratory per week.

Prerequisites: Biology 1001 and 1002.

Note: *Credit can be obtained for only one of Biology 3041 or ENVS 3110.*

**3050 Introduction to Microbiology** is a course in which the basic principles underlying microbial life are studied. Aspects include structure, function, bioenergetics and growth with an emphasis on prokaryotes. Also studied are viruses, microbial diseases, introductory principles of immunology and the control of microorganisms. The laboratory sessions provide training in culture and determinative techniques using microorganisms.

Three hours of lecture and three hours of laboratory per week.

Prerequisites: Biology 1001 and 1002; Chemistry 2440 or 2400; and Chemistry 2401. Chemistry 2401 may be used as a co-requisite.

**3052 Food Microbiology** - inactive course.

**3053 Microbiology for Nurses** examines the fundamentals of microbiology with an emphasis on medical microbiology. The course will include topics such as: host responses to infections, human diseases caused by microorganisms, and the control and exploitation of microorganisms. Entrance is restricted to Nursing students in the Collaborative B.N. program.

Lecture: Three hours per week.

Laboratories: Two hours per week.

Note: *Biology 3053 is not acceptable as one of the required courses for the Minor, Major or Honours programs in Biology, nor is it acceptable for any of the joint programs between Biology and other disciplines.*

**3160 Insect Morphology and Physiology** is an examination of the structural organization and physiology of insects. Comparisons with other arthropod classes will be drawn where appropriate.

Three hours of lecture and three hours of laboratory per week.

Prerequisites: Biology 2122.

Note: *Credit may not be obtained for both Biology 3160 and the former Biology 3150. It is recommended that students enrolling in Biology 3160 have already completed one of Biology 3401, Biology 3402, Biology 4404, or Biochemistry 3106.*

**3202 Comparative Vertebrate Anatomy** examines the phylogenetic development and comparative anatomy of the vertebrates.

Three hours of lecture and four hours of laboratory per week.

Prerequisites: Biology 1001 and 1002.

Note: *Credit may not be obtained for this course and either of the former Biology 3200 or the former Biology 3201.*

**3295 Population and Evolutionary Ecology** is an introduction to the theory and principles of evolutionary ecology and population dynamics.

Three hours of lecture and three hours of laboratory per week.

Prerequisites: Biology 2600; at least one of Biology 2010, 2122 or 2210.

Note: *Credit may not be obtained for both Biology 3295 and the former Biology 4290.*

**3401 Comparative Animal Physiology** is a comparative study of the basic physiological processes, with special attention paid to those strategies invoked by animals which enable them to adapt to environmental changes.

Three hours of lecture and three hours of laboratory per week.

Prerequisites: Biology 2060 and 2210.

Prerequisite or co-requisite: Biochemistry 3106.

Note: *Credit may not be obtained for both Biology 3401 and the former Biology 4401.*

**3402 Principles of Plant Physiology** is a consideration of the principles of plant physiology, including water relations, nutrition, metabolism, growth and development.

Three hours of lecture and three hours of laboratory per week.

Prerequisites: Biology 2010 and 2060.

Prerequisite or co-requisite: Biochemistry 3106.

Note: *Credit may not be obtained for both Biology 3402 and the former Biology 4403.*

**3500 Histology** is a study of microstructure and ultrastructure of tissues and organ systems in vertebrates, particularly mammals, with emphasis on correlating structure and function.

Three hours of lecture and three hours of laboratory per week.

Prerequisites: Biology 2060 and 2210.

**3530 Developmental Biology** is a study of developmental systems in protists, plants and animals with a focus on the underlying principles and molecular mechanisms involved in cellular differentiation, morphogenesis and growth.

Three hours of lecture and three hours of laboratory per week.

Prerequisites: Biology 2060 and either 2250 or Biochemistry 2100.

**3540 Histotechnique** is a course on the theory and practice of preparatory techniques for microscopical study of tissues and cells. Experimental approach in cytochemical localization of cell components and introduction to electron microscopy.

Three hours of lecture and three hours of laboratory per week.

Prerequisite: Biology 3500.

**3610 Boreal Ecology** is a study of the principal features of terrestrial ecosystems, with emphasis on the boreal region.

This course may be offered in a usual 13 week semester or as a two-week field course.

Either: three hours of lecture and three hours of laboratory per week.

Or: a two-week field course that embodies equivalent instructional time.

Prerequisites: Biology 2010, 2250, 2600 and 2900; Statistics 2550 or equivalent.

Note: *Credit can be obtained for only one of Biology 3610 or ENVS 3131.*

**3620 Aquatic Microbial Ecology** is a study of the nature, distribution and activities of microorganisms in the freshwater and marine environments. Field and laboratory work illustrate some of the investigative techniques used in this area of study.

Three hours of lecture and three hours of laboratory per week.

Prerequisites: Biology 2600 and 3050; Statistics 2550 or equivalent.

Note: *Credit may not be obtained for both Biology 3620 and the former Biology 3603.*

**3709 Field Course in Marine Principles and Techniques** begins with a two-week field school immediately prior to the beginning of the Fall Semester. In the Fall Semester there are follow-up lectures, readings and submission of reports. The course is designed to introduce the principal marine environments, organisms and techniques. It is strongly recommended that this course be taken before either Biology 3710, 3711 or 4810. May be taken only with the permission of the Head of Department.

Prerequisites: Biology 2600 and 2900; Statistics 2550 or equivalent.

**3710 The Aquatic Environment** examines the abiotic properties of marine and freshwater systems, including basin formation, chemical properties, circulation and dynamics, sampling techniques and the special characteristics of estuarine systems. Emphasis will be on large bodies of water, but stream hydrology will also be discussed.

This course may be offered in a usual 13 week semester or as a two-week field course.

Either: three hours of lecture and three hours of laboratory per week.

Or: a two-week field course that embodies equivalent instructional time.

Prerequisites: Physics 1021 or 1051; Chemistry 1011 or 1051; Biology 2600 as prerequisite or co-requisite.

Note: *Credit may not be obtained for both Biology 3710 and the former Biology 3700.*

**3711 The Ecology of Open Waters** is a comparative survey of the major biological groups in open water aquatic habitats, both freshwater and

marine, with community structure, trophic interactions and energy flow as central themes. Strategies for measuring population levels and production and for constructing both conceptual and quantitative models of ecosystems and their components are emphasized.

This course may be offered in a usual 13 week semester or as a two-week field course.

Either: three hours of lecture and three hours of laboratory per week.

Or: a two-week field course that embodies equivalent instructional time.

Prerequisites: Biology 2122, 2600 and 3710.

Note: *Credit may not be obtained for both Biology 3711 and the former Biology 3701.*

**3712 Benthic Biology** examines the biology of the aquatic benthos (bottom-dwelling organisms); their origins, adaptations, life histories and ecological roles.

This course may be offered in a usual 13 week semester or as a two-week field course.

Either: three hours of lecture and three hours of laboratory per week.

Or: a two-week field course that embodies equivalent instructional time.

Prerequisites: Biology 2122, 2600 and 3710.

Note: *Credit may not be obtained for both Biology 3712 and the former Biology 3630.*

**3714 Estuarine Fish Ecology Field Course** examines community structure, function and distribution of northern coastal fishes in fjords and estuarine environments. Emphasis on sampling, field techniques, taxonomy, quantitative characterization, adaptations and habitat relationships. A comparative approach will contrast fish communities from other areas. To be held as a two week field course.

Prerequisite/co-requisite: Biology 2600.

**3750 Animal Behaviour I** is an introduction to the mechanisms and development of the behaviour of animals. Topics include: the history of ethology and comparative psychology, methods of animal behaviour study, behaviour of animals in relation to physiology, sensory function, learning, communication, orientation, and other areas in biology and psychology.

Three hours of lecture and three hours of laboratory per week.

Prerequisites: Biology 1001 and 1002; Statistics 2550 or equivalent.

Note: *Credit may be obtained for only one of Biology 3750 or Psychology 3750 and Psychology 4770.*

**3811 Paleontology (W)** (same as Earth Sciences 3811) is taught and administered by the Department of Earth Sciences.

Prerequisites: EITHER Earth Sciences 1002 and Biology 2120 (or Biology 1001 and 1002), OR Biology 2122 and 2210.

Note: *Credit may be obtained for only one of Biology 3811, the former Biology 3800, and the former Earth Sciences 3801.*

**4000 Bacterial Systematics** is a study of bacterial classification, nomenclature and identification. Subjects include classical and numerical taxonomy, aerobic and anaerobic culture techniques, phage typing, serotyping and the significance of genetic relatedness. The laboratory work presents the techniques of determinative bacteriology.

Three hours of lecture and three hours of laboratory per week.

Prerequisites: Biology 2250 and 3050.

**4012 Phycology** studies the biology of the algae. A study of the structure, reproduction and evolution of the major divisions of the algae. Aspects of algal physiology and ecology relating to how algae are adapted to life in freshwater, marine and symbiotic environments, together with economic aspects of phycology, will also be covered. The laboratories will emphasize the recognition and identification of representative species of the major algal divisions with a bias towards local species. There will be field trips to collect material in local marine and freshwater environments.

This course may be offered in a usual 13 week semester or as a two-week field course.

Either: three hours of lecture and three hours of laboratory per week.

Or: a two-week field course that embodies equivalent instructional time.

Prerequisites: Biology 2060 and 2600.

**4014 Biology and Ecology of Boreal and Arctic Seaweeds** is a field course examination of seaweed biology and ecology with special study of living specimens in estuarine, fjordic and exposed coastal sites, demonstrating their physiological and ecological adaptations to cold-water habitats. This course is offered at the Bonne Bay Marine Station during the Summer Semester with two weeks of instruction followed by a week to complete course requirements.

Prerequisite: Biology 2600 or equivalent.

**4040 Mycology** is a study of the physiology, morphogenesis, nature of plant and animal parasitism, ecology and taxonomy of terrestrial and freshwater fungi.

Three hours of lecture and three hours of laboratory per week.

Prerequisites: Biology 2060 and 3050.

Note: *Credit may not be obtained for both Biology 4040 and the former Biology 3020.*

**4141 Nematology** is a study of plant parasitic, insect parasitic and free-living marine, freshwater and terrestrial nematodes, with emphasis on taxonomy, biology, economic importance, control methodologies and environmental applications.

Three hours of lecture and three hours of laboratory per week.

Prerequisites: Biology 2010, 2122 and 2600.

**4150 Insect Systematics and Ecology** is a study of the classification, ecology and behaviour of insects with special emphasis on the boreal fauna.

Three hours of lecture and three hours of laboratory per week.

Prerequisites: Biology 2122 and 2600.

Note: *Credit may not be obtained for both Biology 4150 and the former Biology 4140.*

**4180 General Parasitology** is an examination of parasitism as a way of life, with emphasis on classification, structural adaptation, life cycles and ecology.

Three hours of lecture and three hours of laboratory per week.

Prerequisites: Biology 2122, 2210 and 2600.

**4182 Fisheries and Wildlife Parasitology** is a study of the important parasites of fish and other wildlife and their impact on both individuals and populations.

Three hours of lecture and three hours of laboratory per week.

Prerequisite: Biology 4180.

**4200 Immunology** is a study of vertebrate and invertebrate immune systems including antigens and antibodies and their reactions.

Three hours of lecture and three hours of laboratory per week.

Prerequisites: Biology 2060 and Biology 3050.

**4241 Advanced Genetics** has advanced topics in modern genetic analysis, including regulation of gene expression, developmental genetics, molecular basis of inherited disease, genomics, immuno-genetics, behavioural genetics, and molecular evolution.

Three hours of lecture and three hours of laboratory per week.

Prerequisites: Biology 2250; Biochemistry 2101.

**4245 Biophysics** is an examination of the physical properties involved in defining diffusion, membrane properties, electrochemical potentials and the processes of bioenergetics within cells and organelles. Selected topics in biomechanics and the functioning of whole organisms with respect to size, shape, support, orientation, transport and motility.

Three hours of lecture and three hours of laboratory per week.

Prerequisites: Biology 2060; Biochemistry 2101.

**4250 Evolutionary Genetics** has advanced topics in the study of micro and macro-evolutionary phenomena. Genetic variation in natural populations; theory of genetic drift, mutation, migration, inbreeding, and natural selection; neutral theory of molecular evolution, patterns of nucleotide substitution, heritability and quantitative genetics.

Three hours of lecture and three hours of laboratory per week.

Prerequisites: Biology 2250 and 2900.

**4270 History of Biology** is a consideration of the development of biological concepts as interactions between observations, philosophical systems and cultural environment. This course will normally require students to make verbal presentations to the class, participate in discussions and submit written papers. May be taken only with the permission of the Instructor.

Three hours of lecture plus one three-hour seminar per week.

Prerequisites: A minimum of 90 credit hours overall including a minimum of nine credit hours from any of Biology 2010, 2122, 2210, 2600 and including a minimum of six credit hours in Biology at the 3000 level or above, plus the permission of the Instructor.

**4306 Applied Biology** is an examination of how biological and other sciences are applied to the problems of management and utilization of organisms at both the individual and systems level to meet human needs.

Prerequisites: Biology 2060, 2250, 2600, 2900 and one of Biology 2010, 2122 or 2210.

Note: *Credit may not be obtained for Biology 4306 and either of the former Biology 4303 or the former Biology 4304.*

**4360 Community and Ecosystem Ecology** is a study of the basic principles, patterns and processes of ecological communities and ecosystems.

Three hours of lecture plus a seminar/discussion group each week.

Prerequisites: Biology 2250, 2600 and 2900 and one of Biology 2010, 2122 or 2210; Statistics 2550 or equivalent.

**4402 Electron Microscopy in Life Sciences** - inactive course.

**4404 Microbial Physiology** is a study of the structure and growth of microorganisms. Subjects include metabolic diversity and functions of components and organelles. The physiology of microbes interacting with their environment is emphasized. Quantitative experimental methodology is studied in the laboratory.

Three hours of lecture and three hours of laboratory per week.

Prerequisites: Biology 2250 and 3050; Biochemistry 3106.

**4505 Systematics and Biogeography** is a study of the geographical distributions of plants and animals with particular reference to temporal and spatial variability and to theories advanced to explain historical and recent distribution patterns.

Three hours of lecture and three hours of laboratory per week.

Prerequisites: Biology 2250, 2600, 2900 and one of Biology 2010, 2122 or 2210.

Note: *Credit may not be obtained for both Biology 4505 and Geography 4170.*

**4510 Distribution Patterns in the Sea** is an ecological approach to the description and understanding of biogeographic patterns in the sea. Lectures and discussions will focus on what the main patterns are and how they are determined, aspects of the ocean environment that contribute to pattern, how lifestyles are adapted to oceanic conditions, diversity and

dispersal, analytical techniques, and practical geographic problems concerning the exploitation and management of marine resources. It is recommended (but not required) that students take Biology 3710, 3711 and 4505 beforehand.

Three hours of lecture/seminar and a three hour laboratory/discussion session each week.

Prerequisite or co-requisite: Biology 4605.

**4550 Principles of Endocrinology** comprises an introduction to basic concepts concerned with how chemical messages are transmitted and received between cells to coordinate body functions. Hormonal control of adaptation, reproduction, metabolism, growth, digestion, and electrolyte homeostasis will be discussed. Although the endocrinology of invertebrates and lower vertebrates will be mentioned as appropriate, the main emphasis will be on mammalian and human endocrinology at the level of the whole organism.

Three hours of lecture and three hours of laboratory per week.

Prerequisites: Biology 2122 and 3401; Biochemistry 3106.

**4600 Ichthyology** is the study of fishes: taxonomy, life histories, evolution, behaviour and zoogeography.

Three hours of lecture and three hours of laboratory per week.

Prerequisites: Biology 2210 and 2600.

**4601 Functional Biology of Fish** is an introduction to anatomical, physiological and cellular aspects of selected processes in the life cycle of fishes.

Prerequisites: Biology 2060, 2210, and 3401.

**4605 Quantitative Methods in Biology** (same as Statistics 4581 and the former Statistics 4605) is quantitative reasoning using verbal, graphical and statistical models of scaled quantities (units and dimensions). Exploratory and confirmatory analysis of field and laboratory data. Hypothesis testing, including randomization tests. Topics include the general linear model (t-tests, anova etc), correlation, autocorrelation, geographic statistics, estimates of population size and multivariate methods.

Three hours of lecture and three hours of laboratory per week.

Prerequisite: Statistics 2550.

**4620 Ornithology** examines structure, classification, evolution, ecology and behaviour of birds, with particular reference to those of economic importance. Identification of the birds of Eastern Canada.

Three hours of lecture and three hours of laboratory per week.

Prerequisites: Biology 2210 and 2600.

**4630 Mammalogy** examines evolution, systematics, life histories and distribution of mammals, with particular emphasis on eastern North American forms.

Three hours of lecture and three hours of laboratory per week.

Prerequisites: Biology 2210 and 2600.

**4650 Conservation in Biology and Geography** (same as Geography 4650) is an examination of how biological and geographical principles can be applied to conserving biological diversity in the natural world under conditions of exploitation and habitat loss. Special emphasis will be given to relevant provincial examples.

Three hours of lecture per week and 3 hours of seminar/discussion group per week.

Prerequisites: 30 credit hours in either Biology or Geography and permission of the course co-ordinator.

**4701 Animal Behaviour II** is an examination of the behaviour of animals with particular emphasis on evolution and ecology. Topics include behavioural genetics and evolution, reproductive strategies, social behaviour, habitat selection, territoriality, foraging behaviour, and other topics in biology and psychology.

Three hours of lecture and three hours of laboratory per week.

Prerequisites: Biology 3750 or Psychology 4770.

**4710 Experimental Marine Ecology of Newfoundland Waters** is a two-week field course examines the ecology of cold ocean environments, focusing on energy flux through marine pelagic and benthic flora and fauna of Newfoundland waters, and how the dynamics of this environment influence linkages among organisms in different habitats. The course will be field intensive with some lecture component and a strong hands-on field component. Students will identify local organisms and study how and why they vary in time and space. This course will be offered during two weeks of the Spring semester.

Prerequisite/co-requisite: Biology 2600.

**4750 Fisheries Ecology** Is the application of ecological principles to the problem of managing exploited fish populations. Laboratory exercises will be based on a simulation approach to fisheries problems using computer and animal models.

Three hours of lecture and three hours of laboratory per week.

Prerequisite: Biology 2600.

**4800 Advanced Palaeontology** (same as Earth Sciences 4800) is taught and administered by the Department of Earth Sciences.

Prerequisites: Earth Science/Biology 3811, and one of Statistics 2510, Statistics 2550 or Mathematics 2000

**4810 Research Field Course in Marine Biology** will consist of an intensive two-week field school designed to acquaint students with marine field research, experimental design, methodology and data analysis. Emphasis will be placed on individual projects. Projects must be designed and

approved prior to the commencement of the course and will involve a written report. May be taken only with permission of the Head of Department. At the discretion of the Head of Department, another recognized field course may be substituted for Biology 4810.

Prerequisites: Biology 3710 and any two of Biology 2010, 2122 or 2210. It is strongly recommended that students take Biology 3709 before 4810.

**4820 Field Course in Terrestrial Biology** will begin with a three-week field school immediately prior to the beginning of the Fall Semester. It is designed to acquaint students with terrestrial organisms and environments, and emphasis will be placed on survey and sampling techniques. In the Fall Semester the material and data collected in the field will be used in lecture and laboratory periods dealing with identification, analytical methods, and report compilation.

Prerequisites: Biology 2010, 2122, 2210, 2600 and permission of the Head of the Department.

Recommended: Biology 4605.

**4822 Internship in Biology** is an external applied laboratory where a student works with professionals on a problem or problems in biological research. Co-operating agencies may include Environment Canada, Fisheries and Oceans Canada, Agriculture Canada, the Provincial Departments of Fisheries and Forestry, and others. The student will have a supervisor within the Department and one in the co-operating agency, and will be expected to write a scientific account detailing the particulars of the work experience. The arrangements for the position must be agreed upon,

and a project proposal approved, by the Head of the Department or delegate prior to registration for the course. Enrolment will be dependent upon the availability of suitable positions, and will be limited to students in the Honours Program. This course can be done in any semester, and carries 3 credit hours.

**4900 Research Methods in Genetic Biotechnology** will include DNA extraction, DNA amplification by the Polymerase Chain Reaction (PCR), DNA cloning, DNA sequence analysis and Bioinformatics. Additional modules in gene expression and re-sequencing chip technologies may be included. This will be offered on campus as a three week course. Entry to the course will be by permission of the Head of the Department or delegate and preference will be given to senior students.

Prerequisites: Biology 2060, Biology 2250 or Biochemistry 2100.

**4910-4920 Special Topics in Biology** will be given for senior undergraduates and will be in a two-week format which will involve equivalent instruction time as a course on campus. These courses will cover a range of topics in specialized fields in Biology and may be offered at the Bonne Bay Field Station, at the Harlow campus or elsewhere as appropriate. They may be taught by visiting specialists when available.

**499A and 499B Honours Dissertation** is available only to students in the Honours Program. Requirements for the Dissertation are outlined under **Honours Degrees**.

## 5.3 Chemistry

### 5.3.1 Programs in Chemistry

The following undergraduate programs are available in the department:

1. Major\* or Honours\* in Chemistry
2. Joint Honours in Chemistry and Earth Sciences\*
3. Joint Honours in Chemistry and Applied Mathematics\*
4. Joint Honours in Chemistry and Biochemistry\*
5. Joint Honours in Chemistry and Physics\*
6. Minor in Chemistry

\* These programs are accredited by the Canadian Society for Chemistry.

Details of joint programs are given after the Honours B.Sc. Regulations.

### 5.3.2 Undergraduate Handbook

Additional information about the undergraduate program, individual courses and suggested timetables can be found in the Department of Chemistry Undergraduate Handbook which is available on the web at [www.chem.mun.ca](http://www.chem.mun.ca).

### 5.3.3 Faculty Advisors

Each student majoring in Chemistry will be assigned a Faculty Advisor who should be consulted on all academic matters. Individual programs must be drawn up in consultation with the advisor.

Note: *Students who have obtained a grade of 3 or better on the Advanced Placement courses in Chemistry will normally be eligible for direct entry into Chemistry 1031 or second year courses. Such students must consult the department before registration.*

### 5.3.4 Minor in Chemistry

Candidates who take a minor in Chemistry will complete Chemistry 1050 and 1051 (or 1010, 1011 and 1031) or equivalent, 2400, 2401, 2210, 2300 and 6 credit hours in courses chosen from 3100, 3211, 3300, 3301, 3410, 3411 and 3500.

### 5.3.5 General Degree - Major in Chemistry

The courses required for a Major in Chemistry are:

1. Chemistry 1050 and 1051 (or 1010, 1011 and 1031) or equivalent, 2300, 2210, 2400, 2401, 3100, 3211, 3300, 3301, 3410, 3411, 3500 and 4110.
2. Physics 1050 (or 1020 and 1021) and 1051.
3. Mathematics 1000, 1001, 2000, 2050 and Applied Mathematics 3260.
4. Biochemistry 2101

Recommended courses: Biochemistry 2101, Mathematics 2051, Physics 2820 and/or 2750, and 6 credit hours in one of the following languages: French, German, or Russian.

Students considering declaring Chemistry as their Major are encouraged to contact either the Department Head or the Deputy Head (Undergraduate Studies).

### 5.3.6 Honours Degree in Chemistry

Students wishing to take Honours should consult those sections of the Calendar dealing with Regulations for the Honours Degree of Bachelor of Science. The Honours program in Chemistry consists of at least 66 credit hours in Chemistry courses. It is recommended that candidates also take groups of 18 or more credit hours in each of two other science subjects, normally Biochemistry, Biology, Earth Sciences, Physics, or Mathematics.

#### Required Courses

1. Chemistry 1050 and 1051 (or 1010, 1011 and 1031) or equivalent, 2300, 2210, 2400, 2401, 3100, 3211, 3300, 3301, 3410, 3411, 3500, 4110, 4300, 4302, 490A/B, 6 credit hours selected from courses with initial digits 42, and a selection from the remaining 4000-level courses.

2. Physics 1050 (or 1020 and 1021) and 1051.
3. Mathematics 1000, 1001, 2000, 2050 and Applied Mathematics 3260.
4. Biochemistry 2101

Recommended courses: Biochemistry 2100, Mathematics 2051, Physics 2820 and/or 2750.

A thesis based on a selected research topic carried out under the supervision of a member of the department is to be submitted in the final year.

Chemistry 490A/B will normally require the equivalent of 9 hours/week for 2 semesters. Registration in Chemistry 490A/B is restricted to those students who have honours standing. Evaluation of the dissertation will be pass/fail, assessed by a committee comprising the supervisor and two other faculty members.

With approval of the Heads of the Chemistry and Biochemistry Departments prior to registration, a number of courses in Biochemistry may be substituted for a like number of Chemistry courses.

Six credit hours in one language are recommended: French, German or Russian should be selected in consultation with the Department Head.

Prospective Honours students in Chemistry in their first year should take

1. Six credit hours in English.
2. Chemistry 1050 and 1051 (or 1010, 1011 and 1031) or their equivalents.
3. Physics 1050 and 1051 or 1020 and 1021.
4. Mathematics 1000 and 1001
5. Six credit hours in other courses.

Given appropriate circumstances the Honours Chemistry program may be completed in four years. Students should consult the Undergraduate Student Handbook for timetabling details.

Note: *Students completing first year requirements for any of Chemistry, Mathematics or Physics via the three course options (i.e. Chemistry 1010, 1011, 1031 (or 1800, 1200, 1001), Mathematics 1090, 1000, 1001, Physics 1020, 1021, 1051) instead of the two course options (Chemistry 1050, 1051, Mathematics 1000, 1001, Physics 1050, 1051) will require the corresponding number of extra credits to obtain an Honours degree.*

Arrangements for subsequent years will depend on the other science subjects being studied and should be made in consultation with the Head of the Department.

Note: *Certain advanced courses may only be offered in alternate years. Candidates therefore should consult the Head of the Department before registration.*

Certain of the Graduate courses may be taken in the final year of the Honours Program with the permission of the Head of the Department.

Note: *Details of Joint Honours programs with Biochemistry, Earth Sciences, Mathematics and Physics as outlined under Joint Programs.*

### 5.3.7 Course Restrictions

Credit will be given for no more than one of Chemistry 1000, 1010, 1050, 1200, 150A/B, no more than one of Chemistry 1001, 1031, 1051, 150A/B, and no more than one of Chemistry 1011, 1051, 150A/B.

### 5.3.8 Course List

In accordance with Senate's Policy Regarding Inactive Courses, the course descriptions for courses which have not been offered in the previous three academic years and which are not scheduled to be offered in the current academic year have been removed from the following listing. For information about any of these inactive courses, please contact the Head of the Department.

Note: *Attendance for all Chemistry Laboratory sessions is mandatory. Failure to attend may result in a failing grade or deregistration from the course.*

**1010 and 1011 Introductory Chemistry I and II** examines descriptive chemistry; atomic structure; chemical bonding; periodicity illustrated by the chemistry of selected elements; mole concept and stoichiometry; physical properties of matter; energetics; rates of reaction; chemical equilibrium; electrochemistry.

Prerequisite: Chemistry 1010 is a prerequisite for Chemistry 1011.

Lectures: Four hours per week.

Laboratory: Three hours per week.

**1031 Introductory Chemistry III (F) & (I)** prepares students who have completed Chemistry 1010 and 1011 for Chemistry 2210, 2300 and 2400. It augments the topics covered in Chemistry 1010 and 1011 with the greater depth and problem solving emphasis of Chemistry 1050 and 1051.

Prerequisites: Chemistry 1011 and Mathematics 1000.

Lectures: Four hours per week.

Laboratory: Three hours per week.

**1050 and 1051 General Chemistry I and II** has topics that will be similar to 1010/1011 but will be treated in greater depth with an emphasis on problem solving.

Prerequisites: Mathematics 1000. Mathematics 1000 may be taken concurrently with Chemistry 1050. Chemistry 1050 and Mathematics 1000 are prerequisites for Chemistry 1051.

Lectures: Four hours per week.

Laboratory: Three hours per week.

Notes: 1. *For entry to Chemistry 1050 students must have*

- a. *achieved at least 75% in high school Chemistry 3202 and*
- b. *successfully completed high school Advanced Mathematics 3205.*

2. *Other students, including those with no high school chemistry background, will take Chemistry 1010. It is recommended that students taking Chemistry 1010 have at least 70% in high school*

*Academic Mathematics 3204, or a pass in any university level mathematics course.*

3. *Only six science credit hours will be awarded for a major or honours in Chemistry from the following course groups: Chemistry 1010/1011/1031, or Chemistry 1800/1200/1001 (Sir Wilfred Grenfell College).*

**2210 Introductory Inorganic Chemistry (W)** studies the chemistry of selected s, p, and d block elements. Introduction to crystal and molecular structures and to molecular orbital and crystal field theories.

Prerequisites: Chemistry 1051 (or 1001 or 1031), Mathematics 1000.

Lectures: Three per week.

Laboratory: Three hours per week.

**2300 Introductory Physical Chemistry (F) & (W)** examines introductory chemical thermodynamics and equilibria. Complementary laboratory work with an emphasis on quantitative analysis.

Prerequisites: Chemistry 1051 (or 1001 or 1031), Mathematics 1001, Physics 1051 or 1021.

Lectures: Three per week.

Laboratory: Three hours per week.

**2400 Introductory Organic Chemistry I (F)** is a course on bonding involving carbon; conformations and stereochemistry; introduction to functional groups and nomenclature; properties, syntheses and reactions of hydrocarbons, alkyl halides and alcohols.

Prerequisite: Chemistry 1051 or 1031; or Chemistry 1010 and 1011 with a grade of at least 80% in each; or Chemistry 1011 with a grade of at least 85%; or Chemistry 1001 with a grade of at least 65%.

Lectures: Three per week.

Laboratory: Three hours per week.

Note: *Credit will not be given for more than one of Chemistry 2400, 2420, 2440 and 240A/B.*

**2401 Introductory Organic Chemistry II (W)** is an introduction to the interpretation of infrared, H and C-13 NMR spectra; properties, syntheses and reactions of ethers, simple aromatic compounds, ketones, aldehydes, amines, carboxylic acids and their derivatives; aldol and related reactions.

Prerequisite: Chemistry 2400.

Lectures: Three per week.

Laboratory: Three hours per week.

Note: *Credit will not be given for more than one of Chemistry 2401, 2420, 2440, and 240A/B.*

**2440 Organic Chemistry for Biologists (F) & (W)** is an introduction to the

principles of organic chemistry with an emphasis on material relevant to biological molecules. The laboratory will introduce techniques and illustrate concepts covered in the course.

Prerequisite: Chemistry 1011 (or 1001 or 1051).

Lectures: Three per week.

Laboratory: Three hours per week.

Note: *This course is designed primarily for Biology Majors. It may not be used for credit by Chemistry or Biochemistry Majors and may not serve as a prerequisite for any other Chemistry course. Credit may be obtained for only one of Chemistry 2400, 2420, 2440, 240A/B.*

**3100 Analytical Chemistry I (F) & (W)** is a treatment of data, gravimetric analysis, volumetric analysis including oxidation-reduction titrations using electrochemical techniques, the use of specific ion electrodes, and titrations in non-aqueous systems. Spectrophotometric trace analysis and titration.

Prerequisites: Chemistry 2300.

Lectures and Laboratories: Not more than seven hours per week.

**3211 Inorganic Chemistry (W)** is a detailed examination of the structure, bonding, and chemistry of the d block elements.

Prerequisites: Chemistry 2210 and 2300.

Lectures: Three per week.

Laboratory: Three hours per week.

**3300 Physical Chemistry I (F)** examines the laws of thermodynamics, calorimetry, thermochemistry, equilibrium constants. Introduction to thermodynamics of non-ideal gases. Topics will include partial molal quantities, phase equilibria, thermodynamics of solutions, activity coefficients of non-electrolytes, the Gibbs-Duhem equation.

Prerequisites: Chemistry 2300, Mathematics 2000.

Lectures: Three per week.

Laboratory: Three hours per week.

**3301 Physical Chemistry II (W)** examines electrical conductivity of solutions, electrochemical cells, equilibrium constants of weak electrolytes, activity coefficients of electrolytes. Elementary theoretical chemistry, introduction to quantum mechanics, statistical interpretation of thermodynamic functions of ideal gases, and kinetic theory of gases. Chemical kinetics including relaxation techniques and mass transport phenomena.

Prerequisites: Chemistry 3300 and Applied Mathematics 3260.

Lectures: Three per week.

Laboratory: Three hours per week.

**3410 Bio-organic Chemistry (F)** is a study of the major classes of biomolecules, their structure, function, and in vitro chemistry. An introduction to natural products. Synthetic polymers compared to biopolymers. Heteroaromatic molecules and derived biomolecules.

Prerequisite: Chemistry 2401. It is recommended that Chemistry 3500 be taken concurrently.

Lectures: Three hours per week.

Laboratory: Three hours per week.

Note: *Students may obtain credit for only one of Chemistry 3410 and the former Chemistry 3401.*

**3411 Synthetic Organic Chemistry I (W)** is a survey of some important reactions used in organic synthesis, including pericyclic reactions and those based on carbocation, carbene, nitrene and carbanion intermediates. Emphasis is placed on multifunctional compounds.

Prerequisite: Chemistry 3410, or all of Chemistry 2401, Biochemistry 2100 and Biochemistry 2101.

Lectures: Three hours per week.

Laboratory: Three hours per week.

Note: *Students may obtain credit for only one of Chemistry 3411 and the former Chemistry 3400.*

**3500 Spectroscopic Analysis: Spectroscopy and Structure (F)** is the application of spectroscopic methods to the determination of molecular structure. Emphasis will be placed on electronic, vibrational and rotational spectroscopy, nuclear magnetic resonance spectroscopy and mass spectrometry.

Prerequisites: Chemistry 2210, 2300, 2401. Physics 2750 is strongly recommended.

Lectures and Laboratory: Not more than six hours per week.

**3600 Marine Chemistry (W)** - inactive course.

**4110 Analytical Chemistry II (F)** examines error treatment, atomic emission and absorption spectroscopy, chromatographic and other separation techniques, electroanalytical chemistry, mass spectrometry, x-ray spectroscopy, ion and electron spectroscopy.

Prerequisites: Chemistry 3100 and 3300. Chemistry 3300 may be taken concurrently with Chemistry 4110.

Lectures and Laboratories: Not more than six hours per week.

Note: *Students may obtain credit for only one of Chemistry 4110 and the former Chemistry 4100 and for only one of Chemistry 4110 and the former Chemistry 4101.*

**4150 Advanced Spectrometric Techniques** - inactive course.

**4151 Analytical Separations and Organic Mass Spectrometry** examines advances in the traditional chromatographic techniques, the development of new analytical tools in separation science, the interfacing of mass spectrometers to chromatographic instruments, and other mass spectrometric techniques.

Prerequisites: Chemistry 4110, which may be taken concurrently (or Chemistry 4100 or Chemistry 4101)

Lectures and Laboratories: Not more than six hours per week.

**4152 Electroanalytical Techniques** examines the principles and theory of dynamic electrochemistry, voltammetry, stripping analysis, electro-chemical sensors and detectors.

Prerequisites: Chemistry 4110, which may be taken concurrently (or Chemistry 4100 or Chemistry 4101).

Lectures and Laboratories: Not more than six hours per week.

**4201 Coordination Chemistry in Biological Molecules - Structural, Mechanistic and Magnetic Studies** examines the role of certain transition elements e.g. iron, copper, cobalt, and zinc, in proteins and enzymes will be discussed in terms of structural features, the natural ligands, magnetic properties, mechanisms, etc., and reinforced with examples of 'model compounds'. Magnetic theory, in particular for polynuclear transition metal complexes, will also be developed.

Prerequisite: Chemistry 3211.

Lectures: Three per week.

**4202 Selected Topics in Main Group Chemistry** - inactive course.

**4203 Organometallic Chemistry** - inactive course.

**4204 Inorganic Reaction Mechanisms and Catalysis** is a survey of inorganic and organometallic reactions, their mechanisms and kinetic characteristics. In addition, stereochemical non-rigidity, reactions of coordinated ligands and homogeneous catalysis are discussed.

Prerequisite: Chemistry 3211.

Lectures: Three per week.

**4205 Photochemistry of Transition Metal Complexes** is an introduction to the theory of electronic excited states in transition metal complexes. Applications to artificial photosynthesis, photodynamic therapy, molecular photovoltaics and molecular electronics.

Prerequisites: Chemistry 3211 and 3301 (which may be taken concurrently).

Lectures: 3 hours per week.

**4300 Advanced Physical Chemistry I: Quantum Mechanics and Spectroscopy (F)** examines solutions of the Schrodinger wave equation by means of second order differential equations and operator and matrix methods. Electronic spectra of atoms, and the rotational, vibrational and electronic spectra of diatomic and triatomic molecules. Chemical bonding.

Prerequisite: Chemistry 3301.

Lectures: Three per week.

Laboratory: Three hours per week.

**4302 Statistical Thermodynamic (W)** examines probability theory, ensembles, quantum statistical thermodynamics of ideal gases, perfect crystals, metals and radiation. Semiclassical statistical thermodynamics, distribution functions, dense gases and liquids.

Prerequisite: Chemistry 4300.

Lectures: Three hours per week.

Laboratory: Three hours per week

Note: *Students may obtain credit for only one of the former Chemistry 4301 and Chemistry 4302.*

**4350 Advanced Physical Chemistry III: Selected Topics in Physical Chemistry (W)** - inactive course.

**4411 Topics in Medicinal Chemistry** - inactive course.

**4420 Physical Organic Chemistry (F)** is an introduction to the quantitative and qualitative theories of reactions and reactivity and their application to organic reaction mechanisms and to mechanism elucidation.

Prerequisite: Chemistry 3301, and 3401 or 3411. Chemistry 3500 is strongly recommended.

Note: *Students may obtain credit for only one of Chemistry 4420 and the former Chemistry 4400 and for only one of Chemistry 4420 and the former Chemistry 4401.*

**4430 Synthetic Organic Chemistry II (W)** examines modern synthetic methods with particular attention placed on the synthesis of enantiomerically enriched compounds and newer methods for the formation of carbon-carbon bonds. Designing syntheses of complex organic molecules.

Prerequisite: Chemistry 3401 or 3411. Chemistry 4420 is strongly recommended.

Note: *Students may obtain credit for only one of Chemistry 4430 and the former Chemistry 4410.*

**490A/B Honours Thesis**

## 5.4 Computer Science

### 5.4.1 Programs in Computer Science

The following undergraduate programs are available in the Department:

1. Major in Computer Science
2. Honours in Computer Science
3. Honours in Computer Science (Software Engineering) (B.Sc. only)
4. Computer Internship Option (CIIO) (B.Sc. and B.Sc. Honours only)
5. Minor in Computer Science
6. Applied Mathematics/Computer Science Joint Major (B.Sc. only)
7. Computer Science/Statistics Joint Major (B.Sc. only)
8. Computer Science/Pure Mathematics Joint Major (B.Sc. only)
9. Computer Science/Geography (Cartography option) Joint Major (B.Sc. only)
10. Computer Science/Physics Joint Major
11. Computer Science/Pure Mathematics Joint Honours (B.Sc. only)
12. Computer Science/Statistics Joint Honours
13. Computer Science/Geography (Cartography option) Joint Honours (B.Sc. only)
14. Computer Science/Physics Joint Honours
15. Joint Degree of Bachelor of Science with a Major in Computer Science and Bachelor of Commerce (Co-operative)
16. Computer Science/Economics Joint Major (B.Sc. Only)

Details of our joint program offerings in the Faculties of Arts, Science, and Business Administration may be found under the heading **Joint Programs** following the heading **Regulations for the Honours Degree of Bachelor of Science**.

### 5.4.2 Major in Computer Science

1. Forty-five credit hours in Computer Science courses are required for a major in Computer Science:
  - a. Computer Science 1710, 2710, 2711, 2742, 2760, 3715, 3716, 3719, 3724, 3725, 3754, and 4770.
  - b. At least 6 additional credit hours at the 4000 level in Computer Science courses.
  - c. Three additional credit hours in Computer Science courses at the 3000 level or beyond.
2. Additional courses required of the Majors are: Mathematics 2000, 2050, Statistics 2510, and Pure Mathematics 2320.

Note: *Students are encouraged to take Business 2000, Mathematics 3000, and Statistics 2560.*

### 5.4.3 Honours in Computer Science

1. See General Regulations for the Honours Degree (B.A. or B.Sc. as appropriate).
2. Sixty-three credit hours in Computer Science courses are required for the Honours Degree in Computer Science, including:
  - a. Computer Science 1710, 2710, 2711, 2742, 2760, 3715, 3716, 3719, 3724, 3725, 3754, 4770, and 4780.
  - b. Eighteen additional credit hours in Computer Science at the 4000 level.
  - c. Six additional credit hours in Computer Science courses at the 3000 level or beyond.
3. Additional courses required are: Mathematics 2000, 2050, Statistics 2510 and Pure Mathematics 2320.

Note: *Students are encouraged to take Business 2000, Mathematics 3000, and Statistics 2560.*

### 5.4.4 Honours in Computer Science (Software Engineering) (B.Sc. Only)

Completion of the Honours in Computer Science (Software Engineering) Program does not qualify persons to hold the designation "Professional Engineer" as defined by various Provincial Acts governing the Engineering Profession.

1. See General regulations for the Honours Degree (B.Sc.).
2. Sixty-three credit hours in Computer Science courses are required for the Honours Degree in Computer Science (Software Engineering), including:
  - a. Computer Science 1710, 2710, 2711, 2742, 2760, 3715, 3716, 3718, 3719, 3724, 3725, 3754, 4719, 4759, 4770, and 4780.
  - b. Twelve additional credit hours in Computer Science courses at the 4000 level.
  - c. Three additional credit hours in Computer Science courses at the 3000 level or beyond.
3. Additional courses required are: Mathematics 2000, 2050, Statistics 2510, and Pure Mathematics 2320.

Note: *The Honours project (4780) must be in the area of Software Engineering.*

### 5.4.5 Computer Industry Internship Option (CIIO):

The CIIO provides an opportunity for qualified students to obtain rewarding jobs in computer industries for several months of continuous duration, and, at the same time, to gain practical skills in an employment situation during their course of studies.

The CIIO is available to Computer Science Majors (B.Sc. and B.Sc. Honours only).

#### Application requirement:

1. Applicants must have successfully completed at least Computer Science 1710, 2710, 2711, 2742, 2760, 3715, 3719 and 3724.
2. Applications for the internship will not be considered if all computer science courses required for the Computer Science major/honours degree will have been completed prior to the beginning of the internship.
3. Admission to the CIIO is subject to academic performance.

#### Internship duration:

Subject to the availability of job openings, a student may choose either an 8, 12 or 16 consecutive month internship period.

#### Internship placement:

A competition for internship employment is organized by the Department Co-ordinator (hereafter referred to as Co-ordinator).

A student who has applied to the internship program gives permission to the Co-ordinator to supply prospective employers with copies of his/her resume.

A student who has been accepted to the CIO may obtain his/her own internship placement outside the competition. Such jobs must be confirmed by the employer, and must be subject to the approval of the Co-ordinator and the Head of the Department of Computer Science.

A student who withdraws from an internship program, after a placement, without any reason of grievance, will not be accepted in the internship program again in the future.

Students are not permitted to drop internship periods without prior approval from the Co-ordinator and the Head of the Department of Computer Science. Students who drop an internship period without permission, or who fail to honour an agreement to work with an employer, or who conduct themselves in such a manner as to cause their discharge from the job, will normally be awarded a fail grade for that internship period.

Note: *Students should also refer to the General Academic Regulations (Undergraduate).*

#### **Expectation of work**

The student is expected to submit, within a month from starting his/her internship, a plan of the intended work for the internship period. The student is also required to submit a progress report due in the last week of each semester. The plan of intended work and progress reports are to be submitted to the Coordinator.

At the end of the internship period, the student is required to submit a final report which will include the description of the project, the objectives, the goals, and the duties of the intern; it would also include a history of the intern's activities and accomplishments. The final report is to be submitted to the Coordinator by the first day of examinations.

#### **Registration, Assessment of Performance, and Assignment of Grades**

Students must register for the course Computer Science 3700 every semester during their internship.

Computer Science 3700 is a non-credit course open only to students who have been accepted into the Internship Program.

Student performance evaluations are to be completed by the employer and returned to the Co-ordinator. Evaluations are requested every four months. In the evaluation form, the intern also can include his/her comments.

The overall assessment of work performed during the entire internship period is the responsibility of the Co-ordinator, and will be done based upon input from the employer and the final report submitted by the intern.

Assessment of performance will result in the assignment of one of the following grades in the final semester of internship:

1. *Pass with Distinction*: Indicates EXCELLENT PERFORMANCE in both the work report and work performance.
2. *Pass*: Indicates that PERFORMANCE MEETS EXPECTATIONS in both the work report and the work performance.
3. *Fail*: Indicates FAILING PERFORMANCE in the work report or the work performance.

Also, the following will be noted in the transcript of the intern:

Requirements for the Computer Industry Internship Option have been completed. Internship Duration: - months.

A grade of NC (No Credit) for Computer Science 3700 will be awarded in all semesters of the Internship Option prior to the final semester.

#### **CIO and Honours Program**

In case a student is enrolled in both the Honours program and the CIO, the requirements of both must be met. Upon approval from the honours project supervisor, within the Department, the employer and the head of the Department of Computer Science, an internship project may be submitted as a component of an honours project. These arrangements must be made within the first semester of the Internship placement.

### **5.4.6 Minor in Computer Science**

1. For a Minor in Computer Science, a student must complete at least 24 credit hours in Computer Science courses, including: Computer Science 1710, 2710, 2711, 2742, 2760.
2. The remaining 9 credit hours in Computer Science courses must be at the 3000 level or above.

### **5.4.7 Course Numbering Scheme**

There are five areas of Computer Science offered in the 3000- and 4000-level courses. The meaning of the third digit of a course number is as follows:

- 1- Programming Languages
- 2- Computer Systems
- 3- Numerical Computations
- 4- Theoretical Aspects
- 5,6- Applications (e.g. Artificial Intelligence, Computer Graphics, Data Base, Robotics, Computational Geometry, Image Processing, Computer Networking, Computer Aided Design)
- 7 - Project Course
- 8- Honours Project
- 9- Directed Readings

### **5.4.8 Supplementary Examinations**

Supplementary examinations will be allowed in certain Computer Science courses which have written final examinations. Students should refer to the Faculty of Science degree regulations for details.

### **5.4.9 Faculty Advisors**

The Department has an Undergraduate Advisor for Computer Science majors to consult with on academic matters.

### **5.4.10 Undergraduate Handbook**

Additional information about the undergraduate Computer Science programs and courses can be found in the Computer Science Undergraduate Handbook available from the General Office, Department of Computer Science.



### 5.4.11 Course List

In accordance with Senate's *Policy Regarding Inactive Courses*, the course descriptions for courses which have not been offered in the previous three academic years and which are not scheduled to be offered in the current academic year have been removed from the following listing. For information about any of these inactive courses, please contact the Head of the Department.

#### 5.4.11.1 First Year Courses

**1600 Basic Computing and Information Technology (F) & (W)** offers an overview of computers and information technology. It provides students with the knowledge necessary to answer questions, such as: What is a computer system? How does it work? How is it used? This is done through the use of popular spreadsheet, word processing and database software packages and the Internet. Social issues and implications will also be included.  
Prerequisite: Level III Advanced Mathematics or Mathematics 1090, which can be taken concurrently.  
Lectures: Three hours per week.  
Laboratory: Three hours per week.  
Note: *Students can receive credit for only one of Computer Science 1600, Computer Science 2650 or Computer Science 2801.*

**1700 Introduction to Computer Science (F) & (W)** lays the foundation for the art and the science of computing. The course contains fundamental and topical issues in computers, languages, programming and applications. This course is designed for potential Computer Science majors without a background in programming, but is also available for non majors.  
Prerequisite/Co-requisite: Mathematics 1090 (or equivalent), or Mathematics 1000.  
Lectures: Three hours per week.  
Laboratory: Three hours per week.

**1710 Object-Oriented Programming I (F) & (W)** is an introduction to fundamental programming techniques, primitive data types and operations, program control structures and the use of objects, classes and methods.  
Prerequisites: Mathematics 1000 (which can be taken concurrently), or Mathematics 1090 (or equivalent).  
Lectures: Three hours per week.  
Laboratory: Three hours per week.  
Note: *Students who have previously completed Computer Science 2710 will not be permitted to register or receive credit for Computer Science 1710.*

#### 5.4.11.2 Second Year Courses

**2602 Computer Programming in FORTRAN (F)** is an introduction to computers and their use; and the FORTRAN programming language and its application to the computer solution of numeric and non-numeric problems.  
Prerequisite: Mathematics 1000.  
Note: *Students who have received credit for the former Computer Science 2600, or the former 2601, or the former 2800 cannot receive credit for Computer Science 2602.*

**2650 Introduction to Computing and Information Technology (F) & (W)** provides a broad overview of hardware and software components of computer systems, their structure, and principles of operation. The topics include algorithmic problem solving, visual programming, operating system services, computer networks, elements of artificial intelligence and societal issues. In addition to three one-hour lectures, there will be three hours per week of structured laboratory sessions. Internet and microcomputer software tools in the Windows environment are introduced.  
Prerequisite: Level III Advanced Mathematics, Mathematics 1000 (which can be taken concurrently), or Mathematics 1090 (or equivalent).  
Note: *Students can receive credit for only one of Computer Science 1600, Computer Science 2650 or Computer Science 2801.*

**2710 Object-Oriented Programming II (F) & (W)** continues from Object-Oriented Programming I, and studies object-oriented and event-driven programming. Additional topics include: recursion, basic analysis of algorithms, fundamental data structures such as simple linked structures and stacks, and fundamental computing algorithms such as binary search and quadratic time sorting. A brief overview of programming languages, virtual machines and language translations is also provided.  
Lectures: Three hours per week.  
Laboratory: Three hours per week.  
Prerequisite: Computer Science 1710.

**2711 Introduction to Algorithms and Data Structures (F) & (W)** includes the study of standard ways of organizing and manipulating data in computer storage. Fundamental concepts in the design and analysis of algorithms are also discussed.  
Lectures: Three hours per week.  
Laboratory: Three hours per week.  
Prerequisite: Computer Science 2710.  
Note: *It is recommended that students complete Computer Science 2742 prior to registering for Computer Science 2711.*

**2742 Logic for Computer Science (F) & (W)** is an introduction to propositional and predicate logic with applications. The use of the system of boolean logic in reasoning and circuit design, as well as basic proof techniques and the resolution principle, for both propositional and predicate logic, will be covered. Concepts involving sets will be used to illustrate

different types of proof techniques. The probable intractability of boolean logic and Goedel's incompleteness theorem will be presented.  
Prerequisite: Computer Science 1710.

**2752 Introduction to Business Data Processing (F)** - inactive course.

**2760 Encountering the Computer: Society and the Individual (F) & (W)** examines social, ethical, legal and cultural issues surrounding the use of computers in modern society. These broader social issues are followed by an examination of the use of social and individual psychology in user interface design. Students will be expected to demonstrate an understanding of these issues both directly (through verbal and written discourse) and practically, as applied to the creation of actual software artifacts.  
Prerequisites: Two 1000-level English courses, or equivalent.  
Co-requisite: Computer Science 2710.

**2801 Introductory Computing for Business (F) & (W)** introduces students to computer applications in business, document processing, application development, decision support, and information management. A three hour laboratory is required.  
Prerequisite: Level III Advanced Mathematics, Mathematics 1000 (which can be taken concurrently), or Mathematics 1090 (or equivalent).  
Note: *Students can receive credit for only one of Computer Science 1600, Computer Science 2650 or Computer Science 2801.*

#### 5.4.11.3 Third Year Courses

**3700 Industrial Experience (F), (W), (S)** is a course for students who are admitted to CIIO. Students are required to register for this non-credit course every semester during their internship. This course is open only to students who have been accepted into the Internship Program and provides an opportunity for qualified students to obtain rewarding job experience of 8, 12 or 16 months of continuous duration, during the course of their studies.  
Prerequisite: Admission to the Computer Industry Internship Option (CIIO).

**3710 Vocational Languages (W)** is a study of several programming languages of vocational significance (e.g. a selection from C, C++, Prolog, Perl, Python and LISP). The use of appropriate programming paradigms to solve some significant problems.  
Prerequisite: Computer Science 2711.

**3711 Algorithms and Complexity (F) & (W)** introduces the most common and effective algorithm design techniques (e.g. divide and conquer, dynamic programming, greedy algorithms). The theory of NP - completeness is also discussed. Examples will be drawn from various fields such as graph theory and string matching.  
Prerequisite: Computer Science 2711 and 2741.  
Note: *Credit cannot be obtained for both Computer Science 3711 and Computer Science 3719.*

**3714 Programming Languages and their Processors (F) & (W)** reviews typical elements of (imperative) programming languages, and then discusses language implementations in the form of compilers and interpreters. The topics include specification of syntax and semantics of programming languages, discussion of expressions and assignments, side effects, control structures, data and procedural abstractions, parameter passing mechanisms, bindings, scopes, and type systems. The recursive-descent technique is used for illustrations of different aspects of syntax analysis, code generation and error recovery. Language interpreters are discussed for both low-level and high-level languages.  
Prerequisites: Computer Science 3719 and 3724.

**3715 Network Computing with WEB Applications (F) & (W)** studies how distributed applications (e.g., client/server Web applications) are constructed using the Internet. Topics covered include: the socket interface for network communication, client/server applications, browser scripting using Javascript, content generation for web applications (e.g., jsp, php), html/css documents, and the use of cryptography to handle security.  
Prerequisite: Computer Science 2711.

**3716 Software Methodology (F) & (W)** studies the development of software by gathering the requirements of the software program, analyzing the requirements to create a development model, and creating the software and documents for the software product. This course studies techniques for all three software development activities.  
Prerequisite: Computer Science 2711.

**3717 Symbolic Computation and Recursion (W)** is an exposure to symbolic computation with emphasis on recursive programming techniques using the programming language, SCHEME.  
Prerequisites/Co-requisites: Computer Science 2711 and 2742.

**3718 Programming in the Small (F)** demonstrates the tools and techniques used in the construction of small software systems. The software tools and techniques to be covered include analysis and design of software components, software construction tools (e.g. linkers, builders, debuggers), software library use and design, and system integration.  
Prerequisites: Computer Science 2711 and Pure Mathematics 2320.

**3719 Algorithms and Complexity (F) & (W)** includes (1) advanced algorithm design strategies based on complex data structures and non-standard (parallel / distributed / randomized / approximate) models of computation and (2) analysis techniques for proving polynomial-time intractability and general uncomputability. The latter involves an introduction to abstract models of computation via the formal languages, grammars, and automata of the Chomsky Hierarchy.

Prerequisites: Computer Science 2711 and Pure Mathematics 2320.

Note: *Credit cannot be obtained for both Computer Science 3711 and Computer Science 3719.*

**3723 Logic Design (F)** - inactive course.

**3724 Computer Organization (F) & (W)** can be studied at the digital logic implementation level, the instruction set architecture level, and the translation of programming languages to the underlying machine instruction level. This course studies computer organization at these levels.

Prerequisites: Computer Science 2711 and Computer Science 2742.

Co-requisite: Pure Mathematics 2320.

**3725 Computer Architecture and Operating Systems (F) & (W)** covers system design and the architectural implementations of these designs. The objective is to develop the basic concepts of processor design, memory management, operating systems, and I/O devices and their interactions.

Prerequisite: Computer Science 3724.

**3731 Numerical Methods (W)** main objectives are the development of algorithms for the numerical solution of mathematical problems and the study of the numerical stability of these algorithms. The efficiency of these algorithms with respect to speed and storage requirements is considered as well. Emphasis is also placed on the study of the sensitivity of selected problems to perturbations in the data. There is also a brief introduction to the development of numerical algorithms that take advantage of advanced computer architectures, such as pipeline processors, array processors and parallel processors.

Prerequisites: Mathematics 2000, and one Computer Science 2602 or 2710.

Note: *Credit cannot be obtained for both Computer Science 3731 and Applied Mathematics 3132.*

**3740 Abstract Machines, Languages and Computations (F) & (W)** provides an introduction to formal languages, formal grammars and computations. The topics include regular languages, regular expressions, deterministic and nondeterministic finite automata, formal grammars, Chomsky hierarchy, context-free grammars and languages, ambiguity, pushdown automata, Turing machines, recursive and recursively enumerable languages, Church-Turing thesis, and the concept of algorithm, universal Turing machines, decidability, reducibility.

Prerequisites: Computer Science 2711 and Pure Mathematics 2320.

**3751 Computational Aspects of Operations Research (W)** - inactive course.

**3753 Computational Aspects of Linear Programming (F)** is an introduction to the Linear Programming Problem (LPP). The emphasis is placed upon developing the most recent and numerically reliable algorithms for the solution of the Linear Programming Problem. The numerical stability of these algorithms will be examined as well. Geometric understanding of the LPP. Simplex method for the LPP. Sparse matrix LPP. Duality and postoptimality analysis. Extensions to the simplex algorithm. Principles of interior algorithms for the LPP.

Prerequisite: Mathematics 2050, and one of Computer Science 2602 or 2710.

**3754 Introduction to Information and Intelligent Systems (F) & (W)** introduces students to application areas that are away from usual number-based and text-based processing. Students will learn the basic concepts and become aware of the historical developments and social and ethical issues related to the application areas such as intelligent systems and information management. This exposure will help students to become knowledgeable about managing large volumes of data and dealing with problems that are well defined but whose algorithmic solutions are not feasible or problems that are fuzzily defined.

Prerequisites: Computer Science 2711 and Computer Science 2742.

**3790 Directed Readings** - inactive course.

#### 5.4.11.4 Fourth Year Courses

**4711 Structure of Programming Languages (F)** covers programming language design considerations; syntactic and semantic structure; survey of typical features and operations; analysis of facilities for control and data structuring; language extensibility; execution models; formal specification of programming languages.

Prerequisite: Computer Science 3714.

**4712 Compiler Construction (W)** studies properties of formal grammars and languages; syntax-directed parsing and code generation; top-down and bottom-up parsing methods; LL(k) and LR(k) grammars and parsers; Code optimization; compiler writing tools.

Prerequisite: Computer Science 3714.

**4715 and 4717 Special Topics in Programming Languages**

**4718 Software Methodology (F) & (W)** introduces methods and tools for developing, managing, and maintaining large-scale software systems. The life-cycle of software development is covered with special emphasis. The topics discussed include development models and environments, project management, requirement engineering, design and programming techniques, software validation, maintenance, and re-engineering.

Prerequisites: Computer Science 3719. Students are encouraged to take Computer Science 3718 prior to doing this course.

**4719 Software Specification (F)** emphasizes the mathematical

specification of software in Z. Z is a mathematical notation based on sets, functions, and relations, using schemas to place logical constraints on sets of values. The basic of Z notation and schema calculus will be presented, followed by examples of the use of Z. In addition, some elementary features of a pure functional programming language will be presented to further support the advantages of a mathematical treatment of software.

Prerequisites: Computer Science 3716 and 3719.

**4721 Operating Systems Principles (F) & (W)** provides an introduction to the main concepts and techniques used in operating systems. The topics include history of operating systems, structures of operating systems, process management, process coordination, deadlocks, memory management, secondary storage management, file management, security and protection issues, elements of distributed operating systems, and selected case studies.

Prerequisite: Computer Science 3725.

**4723 Introduction to Microprocessors (F)** examines the architecture and instruction sets for several microprocessors. The use of microprocessors as device controllers; comparisons of hardware and program techniques; microprocessor interfacing with external devices; methods of I/O; bus structures; modern microprocessor support devices are discussed.

Prerequisite: Computer Science 3724.

Lecture: Three hours per week.

Laboratory: Minimum of three hours per week. Practical experience with basic principles will be obtained through laboratory experience.

**4725 Introduction to LSI Design (W)** - inactive course.

**4726-4729 Special Topics in Computer Systems**

**4734 Matrix Computations and Applications (W)** is an introduction to linear algebra; solution to linear systems; scaling, improving and estimating accuracy; the linear least squares problem; the eigenvalue problem; singular value decomposition of a matrix; the generalized eigenvalue problem.

Prerequisite: Computer Science 3731.

**4735 Advanced Matrix Computations and Applications (F)** - inactive course.

**4736-4739 Special Topics in Numerical Computations**

**4741 Theory of Abstract Automata and Formal Languages (W)** covers more advanced topics of abstract automata, formal grammars and languages. They include timed and stochastic automata, probabilistic grammars, tree automata and languages, cellular automata, matrix grammars, controlled rewriting systems, and L-systems. Applications in computer graphics, visualization and digital images, and modeling of systems are used as illustrations of the formalisms.

Prerequisite: Computer Science 3740.

**4742 Computational Complexity (F)** is an in-depth discussion of computational complexity theory. Topics covered in the course include: models of computation (for both serial and parallel computations); complexity measures; reducibility; complexity classes (NP, PSPACE, NC, LOGSPACE and P); and randomized computations.

Prerequisite: Computer Science 3719.

**4745-4749 (Excluding 4748) Special Topics in Theoretical Aspects**

**4748 Introduction to the Science of Complexity (F)** is an exploration of the use of computers in the simulation of complex systems. Some theories and models, such as cellular automata, artificial life, fractals, genetic algorithms, chaos, and evolution will be discussed and will be used in the modelling of "real-life" systems. The approach in this course is practical. Students have to write a number of programs of different levels of sophistication including a final project.

Prerequisite: Computer Science 3719.

**4751 Computer Graphics (F)** examines display devices, display processors, display file compilers, display transformations, structured display files, graphical input devices, perspective, hidden line elimination, languages and graphics systems.

In addition to three one-hour lectures, there will be a minimum three hour laboratory per week, to be scheduled by the Department.

Prerequisites: Computer Science 3719 and Mathematics 2050.

**4753 Artificial Intelligence (F)** has selected topics from AI programming languages; heuristic searching; problem solving; game-playing; knowledge representations; knowledge-based systems; reasoning in uncertainty situations; planning; natural language understanding; pattern recognition; computer vision; and machine learning.

Prerequisites: Computer Science 3719 and 3754.

**4754 Database Systems (F)** introduces students to database processing, database management systems and database design considerations. It will cover the theory and methodologies essential for the relational database design, implementation, manipulation, optimization and management.

Prerequisites: Computer Science 3725 and 3754.

**4759-4769 (Excluding 4756, 4759, 4761 and 4762) Special Topics in Applications**

**4756 Image Processing (W)** will centre on the key analytical and algorithmic tools and concepts of digital image processing. Topics will include Transformations, Enhancement, Encoding, Data Bases, Segmentation and Description.

In addition to three one-hour lectures, there will be a three hour laboratory per week, to be scheduled by the Department.

Prerequisite: Computer Science 3719.

**4759 Computer Networks (W)** looks at how the operation of computer networks requires the following: a) communication between two computers, b) information transfer between two computers not directly connected, and c) services that need computer communication. This course focuses on the standard solutions and services used to fulfill the previous requirements. These include: physical transmission of signals, reliable communication based on unreliable communication channels, the routing of messages between connected computers to reach computers that are not directly connected, e-mail, file transfer, name servers, remote terminal access and the World Wide Web. Particular attention will be placed on the workings of the Internet.

Prerequisite: Computer Science 3725.

**4761 Human-Computer Interaction (W)** emphasizes user-interface design, distinguishing usability research from testing. Students identify usability issues, and then prototype and analyze their own solutions. Representative methods, techniques and tools related to design, testing and research are discussed. Specific topics may include: environments and toolkits, task analysis, user modeling, user psychology, qualitative and quantitative data analysis.

Prerequisites: Computer Science 2760 and 3719 and Statistics 2510.

**4762 Introduction to Computational Molecular Biology (W)** will give an overview of computational problems and algorithms for these problems associated with a variety of analyses of biological molecular data.

Prerequisite: Computer Science 3719.

**4770 Team Project (F) & (W)** has as its main objective to develop a working prototype of a software system as a team effort. A group of students will work on a project for a team, experiencing the advantages and difficulties of team projects.

Prerequisite: Computer Science 3716.

**4780 Honours Project** introduces computer science honours students to research activities, familiarizes them with a special problem in computer science, and provides independent study on an advanced topic under the direct supervision of a member of the computer science faculty. The topic is decided in consultation with the supervisor. The student is required to produce a written report on the project, to include the literature search on the topic, and to present this work at a departmental seminar prior to the last week of the semester.

Prerequisite: Consent of the Head of Department.

Note: *This course is only available to students who have been accepted into the honours program.*

## 5.5 Earth Sciences

### 5.5.1 Programs in Earth Sciences

The following undergraduate programs are available:

#### 120 credit hour programs

1. Honours or General degrees in Earth Sciences
2. Joint Honours in Earth Sciences/Physics
3. Joint Honours in Geography/Earth Sciences
4. Joint Honours in Geophysics/Physical Oceanography
5. Joint Major in Earth Sciences/Physics

#### 135 credit hour programs

1. Joint Honours in Biology and Earth Sciences
2. Joint Honours in Earth Sciences/Chemistry

#### 24 credit hour program

1. Minor in Earth Sciences

Although Honours programs can be completed in 120 credit hours, students who do not select the prescribed common block of required courses will normally need more than 120 credit hours to satisfy degree requirements.

Details of joint programs are given after the **Regulations for the Honours Degree of Bachelor of Science**.

### 5.5.2 Undergraduate Handbook

Additional information about the undergraduate program, individual courses and suggested timetables can be found in the Department of Earth Sciences Undergraduate Handbook which is available on the web at [www.esd.mun.ca](http://www.esd.mun.ca).

### 5.5.3 Entrance Requirements

In order to be formally admitted to major programs in Earth Sciences, students must have successfully completed 3 first-year credit hours in each of the following departments: English, Mathematics, Earth Sciences, Chemistry and Physics; these courses must be selected from the list of required courses for degree programs in Earth Sciences. Students are encouraged to declare their major in their first year of study at the university.

Most of the 2000 level Earth Sciences courses that are required for major and minor programs in Earth Sciences have Physics and Chemistry prerequisites, and students are advised to complete these prerequisites in their first year of study.

Students will not normally be permitted entry to 3000 level (or above) Earth Sciences courses without having completed all 1000-level courses listed in the **Common Block of Required Courses** specified in Clause 1. in the Major Programs in Earth Sciences.

### 5.5.4 Minor in Earth Sciences

A Minor in Earth Sciences will consist of the following:

1. Earth Sciences 1000, 1002, 2030, 2031, 2401 or 2702.
2. Nine credit hours chosen from Earth Sciences courses at the 2000 level or higher with at least 3 credit hours from courses at the 3000 level or higher. Credit hours from Earth Sciences 2150, 2311, 2914, 2915, 2916, 4310 and 4950 cannot be used to fulfil this requirement.

Several of the courses at 3000 level or higher have Earth Sciences 2502 and 2905 as co- or prerequisites.

### 5.5.5 Major Programs in Earth Sciences

Programs in Earth Sciences consist of a common block of required courses (below), and additional courses that depend on the degree being sought.

#### Common Block of Required Courses:

All majors in Earth Sciences must complete those courses specified in Clauses 1. through 4. Students should examine prerequisites of 3000 level courses in order to decide which course to select under Clauses 3. and 4.

1. English 1080 and 1110 (or equivalent), Mathematics 1000 and 1001, Earth Sciences 1000 and 1002, one of Chemistry 1010 or 1050

(or equivalent) and one of Chemistry 1011 or 1051 (or equivalent), Physics 1050 and 1051 or Physics 1020\* and 1021\*.

\*Students who intend or are required to complete higher level Physics courses must complete Physics 1051 as well, since it is a prerequisite for higher level Physics courses. Students should review the Department of Physics calendar entry for these courses. Students will receive credit for only two first year Physics courses if they take Physics 1020, 1021 and 1051.

2. Earth Sciences 2030, 2031, 2401, 2502, 2702, 2905.
3. Mathematics 2000 or Statistics 2510.
4. Biology 2120 (or Biology 1001 and 1002), or Physics 2055.

Students must ensure that the prerequisites for Earth Sciences courses are fulfilled. Great difficulties in timetabling may be encountered if the required first-year courses are not completed before the beginning of second year.

### 5.5.6 Honours B.Sc. Degree in Earth Sciences

Geoscientific careers vary widely in required background. The Honours B.Sc. program is designed with considerable choice in order that students may personalize their programs based on career goals. Note that the flexibility afforded by this program is not without limits. Some courses have prerequisites, and it is ultimately the student's responsibility to ensure that these prerequisites are satisfied. Students should consult faculty members and the departmental Student Handbook for guidance in selecting courses appropriate to particular career paths.

In addition to the **Common Block of Required Courses** listed under **Major Programs in Earth Sciences**, the following requirements must be completed to qualify for the Honours B.Sc. degree in Earth Sciences:

1. Earth Sciences 499A and 499B.
2. At least 31 additional credit hours from Earth Sciences courses at 3000 and/or 4000 levels with a minimum of 12 credit hours from courses at the 4000 level. Credit hours from Earth Sciences 2150, 2914, 2915, 2916, 4310 and 4950 cannot be used to fulfil this requirement.
3. Six credit hours from the Faculty of Science courses numbered 2000 or higher. Credit hours from Earth Sciences courses, Biology 3811 and the former Physics 2050 are excluded.
4. Additional credit hours selected to conform with regulations for the Honours Degree of Bachelor Science so as to achieve a total of 120 credit hours. Students are encouraged to complete a minor in another department.

### 5.5.7 General B.Sc. Degree in Earth Sciences

In addition to the **Common Block of Required Courses** listed under **Major Programs in Earth Sciences**, the following requirements must be completed to qualify for the General B.Sc. degree in Earth Sciences:

1. Twenty-one additional credit hours from Earth Sciences courses at 3000 and/or 4000 levels with a minimum of 9 credit hours from courses at 4000 level. Credit hours from Earth Sciences 2150, 2914, 2915, 2916, 4310, 4950 and 499A/B cannot be used to fulfill this requirement.
2. Six credit hours from Science Faculty courses numbered 2000 or higher. Credit hours from Earth Sciences courses, Biology 3811 and the former Physics 2050 are excluded.
3. Additional credit hours selected to conform with regulations for the General Degree of Bachelor Science so as to achieve a total of 120 credit hours. Students are encouraged to complete a minor in another department.

Students are advised that this is the minimum requirement for the General B.Sc. in Earth Sciences. Many provinces, including Newfoundland and Labrador, have legislation requiring registration of professional geoscientists. A basic requirement for registration is, in most cases, the course equivalent of an Honours B.Sc. degree. Students intending to make a career in Earth Sciences should consider taking the Honours Degree program of courses, regardless of whether honours standing is maintained.

Table of Credit Restrictions for Present Earth Sciences Courses with Former Courses

Present	Former Equivalents	Present	Former Equivalents
Earth Science 1000	Earth Science 1010, Geology 1000, Geology 1010	Earth Science 3400	Earth Science 3120, Geology 3120
Earth Science 1001	Earth Science 1011, Geology 1001, Geology 1011	Earth Science 3611	Earth Science 4611
Earth Science 2030	Earth Science 203A, Geology 203A	Earth Science 3701	Earth Science 3070, Geology 3070
Earth Science 2031	Earth Science 203B, Geology 203B	Earth Science 3811	Earth Science 3801, Earth Science 2801, Geology 2801
Earth Science 2150	Physics 2150	Earth Science 4053	Geology 4053
Earth Science 2310	Earth Science 2300, Earth Science 2900, Geology 2900	Earth Science 4054	Earth Science 4052, Geology 4052
Earth Science 2400	Earth Science 2161, Earth Science 2070, Physics 2070	Earth Science 4160	Physics 4160
Earth Science 2401	Earth Science 3400, Earth Science 3120, Geology 3120	Earth Science 4171	Physics 4171
Earth Science 2502	Earth Science 2501, Earth Science 3200, Geology 3200	Earth Science 4179	Earth Science 4970, Physics 4970
Earth Science 2702	Earth Science 3701, Earth Science 3070, Geology 3070	Earth Science 4211	Geology 4211
Earth Science 2905	Earth Science 2310, Earth Science 2300, Earth Science 2900, Geology 2900	Earth Science 4302	Earth Science 4501, Geology 4501
Earth Science 2914	Earth Science 2414, Geology 2414	Earth Science 4310	Geology 4310
Earth Science 2915	Earth Science 2415, Geology 2415	Earth Science 4312	Earth Science 4311, Earth Science 4111
Earth Science 3053	Earth Science 3050, Earth Science 3052, Geology 3050	Earth Science 4901	Earth Science 4320, Earth Science 400A, Geology 400A
Earth Science 3054	Earth Science 2503 and Earth Science 3053	Earth Science 4400	Earth Science 4120, Geology 4120
Earth Science 3055	Earth Science 2503 and Earth Science 3053	Earth Science 4502	Earth Science 4201, Geology 4201
Earth Science 3161	Earth Science 3160, Physics 3160	Earth Science 4601	Geology 4601
Earth Science 3170	Physics 3170	Earth Science 4700	Geology 4700
Earth Science 3172	Earth Science 3171, Physics 3171	Earth Science 4800	Earth Science 4110, Geology 4110
Earth Science 3210	Geology 3210	Earth Science 499A/B	Earth Science 4991, Geology 4991

**General notes for all Earth Sciences programs and courses**

- Notes:
1. Students wishing to pursue study within the programs offered by Earth Sciences are strongly advised to keep in close contact with the Department to discuss course programs before registration in order to maintain proper sequencing.
  2. Students wishing to take some Earth Sciences courses without intending to major in Earth Sciences should consult with the Head of Department (or delegate) to determine the courses most suitable to their needs and capabilities. Earth Sciences 2914, 2915, 2916 and 2150 are especially suitable for such students and have no Earth Sciences prerequisites.
  3. Most courses comprise six hours of instruction per week, usually three hours of lectures or seminars and a three-hour laboratory period; however, at an advanced level other methods of instruction may be adopted.
  4. Consult the notes of field courses 2905, 3905 and 4905 for additional information. These courses require payment of a participation fee to cover costs for logistics and equipment. Registration for these courses will be by application only and may be competitive.
  5. The prerequisites for courses 4302, 4902 and 4903 refer to core courses in the Faculty of Science. For the purposes of these prerequisite statements, core courses are defined as those courses that are specified by each department as mandatory to fulfil the course requirements for their General or Honours programs.
  6. Certain of the 4000 level courses may not be offered every year.
  7. At most 6 credit hours in courses at the 1000-level can be used towards the course requirements in Earth Sciences for the Major, Minor, Joint Major, Honours or Joint Honours.

**5.5.8 Course List**

The first digit of each course number designates the level (year) of the course. The second digit indicates the area of Earth Sciences into which the course best fits, as follows:

**Second Digit**

- 0 - mineralogy and petrology
- 1 - geophysics
- 2 - economic geology
- 3 - stratigraphy and marine geology
- 4 - structural geology and tectonics
- 5 - geochemistry
- 6 - technical fields and petroleum geology
- 7 - sedimentation, geomorphology
- 8 - paleontology
- 9 - general and dissertation

In accordance with Senate's *Policy Regarding Inactive Courses*,

the course descriptions for courses which have not been offered in the previous three academic years and which are not scheduled to be offered in the current academic year have been removed from the following listing. For information about any of these inactive courses, please contact the Head of the Department.

**5.5.8.1 First Year**

**1000 Earth Systems** is a survey of the structure, function and interrelations of Earth's lithosphere, hydrosphere, atmosphere and biosphere. Topics include an exploration of the physical and chemical properties of planetary materials, forces driving and sustaining Earth systems, and biological modifiers (including humankind) on the Earth today.

Lectures: Three hours per week.

Laboratories: Three hours per week.

**1001 Evolution of Earth Systems** examines earth's present structure and environment, the product of 4.5 billion years of planetary evolution, are explored from the rock and fossil record. Examples, illustrated with rocks,

fossils and maps, are selected from the geological history of North America, with particular emphasis on Newfoundland and Labrador.

Lectures: Three hours per week.

Laboratories: Three hours per week.

Prerequisite: Earth Sciences 1000.

**1002 Concepts and Methods in Earth Sciences** provides an introduction to a broad range of concepts concerning the development of the geological record and the Earth; practical methods for collection of field based data; topics in map interpretation and geometric analysis, stratigraphy, paleontology, structure and petrology. The course is presented with an emphasis on the development of practical skills needed to pursue a career in Earth Sciences.

Lectures: Three hours per week.

Laboratories: Three hours per week.

Prerequisite: Earth Sciences 1000.

### 5.5.8.2 Second Year

**2030 Mineralogy (F)** provides an introduction to crystallography and the structure of minerals; introduction to crystal optics; study of the rock forming minerals and minerals of economic significance. Laboratory work comprises study of the structures and symmetries of minerals, chemistry of rock forming minerals, introduction to transmitted light microscopy of rocks, hand specimen recognition of common rocks and minerals.

Prerequisites: Earth Sciences 1000, Chemistry 1011 (or 1051 or equivalent), Physics 1051 (or 1021 or 1054), and its Mathematics prerequisite is strongly recommended.

Co-requisite: Earth Sciences 2502.

Note: See credit restriction under Earth Sciences 2031.

**2031 Mineralogy and Petrography (W)** includes topics: petrography and classification of igneous, metamorphic and sedimentary rocks; further study of the optical and chemical properties of rock-forming minerals; applications of relevant phase equilibria of minerals. Laboratory work comprises optical mineralogy and petrography of igneous, metamorphic and sedimentary rocks.

Prerequisites: Earth Sciences 2030 and 2502.

Note: Credit cannot be obtained for both Earth Sciences 203A/B and one or both of Earth Sciences 2030 and 2031.

**2150 The Solar System (F) & (W)** describes the basic astronomy of the Solar System, tracing the search to understand motion of the Sun, Moon and planets in the sky; modern observations of planets, moons, comets, asteroids and meteorites and what they tell us about the origin and evolution of the Solar System.

Note: Earth Sciences 2150 is designed for students taking Earth Sciences as an elective. Earth Sciences 2150 is not acceptable as one of the required courses for the Minor, Major or Honours programs in Earth Sciences.

**2311 Geoscience Communication (W)** is an introduction to the fundamentals of preparation of written and oral geoscience reports, emphasizing organization, correct use of terminology, concise description, preparation of abstracts and introductions, integration of numerical data and publication-quality illustrations, and oral presentation skills. Topics for reports will be selected from the subject matter of other 2000 level Earth Sciences courses.

Prerequisites: Earth Sciences 2905 and 6 credit hours in English.

Lectures: two hours per week.

Tutorials: three hours per week.

**2400 Plate Tectonics (W)** examines the concepts of plate dynamics and associated geological processes based on modern observations, and their application to the geological record. Laboratories will include the use of computer modelling techniques and an introduction to the relationship of physical environments of rock formation with plate tectonic setting.

Prerequisites: Earth Sciences 1002, Chemistry 1011 (or 1051 or equivalent), Mathematics 1000, Physics 1051 (or 1021 or 1054).

Note: Credit may not be obtained for both Earth Sciences 2400 and the former Earth Sciences 2161.

**2401 Structural Geology (W)** provides an introduction to basic concepts; the physics of rock deformation, the classification and descriptive geometry of major and minor structures and their relationship to stress and strain. Laboratory work will concentrate on analysis of structural orientation data, and the analysis of structures in geological maps and cross-sections.

Prerequisites: Earth Sciences 2905 or permission of the Head of the Department (or Delegate) for students following a minor in Earth Sciences.

Notes: 1. Earth Sciences majors are advised to complete field course, Earth Sciences 3905, immediately following completion of this course.

2. Credit may not be obtained for both Earth Sciences 2401, and the former Geology 3120 or Earth Sciences 3120 or Earth Sciences 3400.

**2502 Introduction to Geochemistry (F)** provides an overview of both low- and high-temperature geochemistry. Topics include: origin and classification of the elements; chemical differentiation of the solar system and solid Earth; aqueous geochemistry and the stability of minerals; radiogenic and stable isotopes. Geochemical concepts are illustrated using data and processes drawn from Earth systems. The laboratory component emphasizes the development of numerical skills needed in geochemistry.

Prerequisites: Earth Sciences 1000, Chemistry 1011 (or 1051 or equivalent). Co-requisite: Mathematics 1001.

**2702 Sedimentology and Stratigraphy (F)** is a study of the origin and composition of sediments with a focus on depositional processes and resulting sedimentary structures. Study of environments of deposition and the stratigraphic framework of sedimentary successions. Laboratories involve local field trips and the study of hand samples of sedimentary rocks.

Prerequisite: Earth Sciences 1002.

Note: Credit may not be obtained for both Earth Sciences 2702 and the former Geology 3070 or Earth Sciences 3070 or Earth Sciences 3701.

**2905 Introduction to Geological Mapping (F)** is a two credit hour course based on approximately 6 days of geological mapping in Precambrian rocks near St. John's, and 2 days of in-class work preparing a digital map and written report. Emphasis is placed on the recognition and description of sedimentary and igneous rocks in the field, and techniques of geological mapping and the taking of field notes.

Prerequisite: Earth Sciences 1002.

Notes: 1. This course will be given during a special session immediately preceding the fall semester. Entry is by application to the Head of the Department (or delegate) only.

2. Credit may not be obtained for both Earth Sciences 2905 and the former Earth Sciences 2310 or Earth Sciences 2300.

**2914 The Earth's Energy Resources: Past, Present and Future (F)** (same as former Geology 2414 and Earth Sciences 2414) provides a scientific analysis of the Earth's energy resources. The history of human exploitation of them; consequences for quality of life, and political and economic power; scenarios for the future.

Note: Earth Sciences 2914 is designed for students taking Earth Sciences as an elective subject. This course complements traditional disciplines such as history, economics, and political science and should be of particular interest to teachers. Earth Sciences 2914 is not acceptable as one of the required courses for the Minor, Major or Honours programs in Earth Sciences.

**2915 The Earth's Material Resources: Past, Present and Future (W)** (same as former Geology 2415 and Earth Sciences 2415) provides a scientific analysis of the Earth's material resources (metals, non-metals, water). The history of human exploitation of them; consequences for quality of life, and political and economic power; scenarios for the future.

Note: Earth Sciences 2915 is designed for students taking Earth Sciences as an elective subject. This course complements traditional disciplines such as history, economics, and political science and should be of particular interest to teachers. Earth Sciences 2915 is not acceptable as one of the required courses for the Minor, Major or Honours programs in Earth Sciences.

**2916 Natural Hazards on a Dynamic Earth (W)** describes the surface of the Earth being in a constant state of change, thereby posing risks and challenges for society. An understanding of geological processes in the past and present provides context for evaluating risks related to earthquakes, volcanic activity and mass movements, challenges related to water resources, land-use planning and waste disposal, and the background to interpret sources and consequences of climate change. The course will provide a broad perspective on contemporary issues facing society.

Note: Earth Sciences 2916 is designed for students taking Earth Sciences as an elective subject. This course complements traditional disciplines such as history, economics, and political science and should be of particular interest to teachers. Earth Sciences 2916 is not acceptable as one of the required courses for the Minor, Major or Honours programs in Earth Sciences.

### 5.5.8.3 Third Year

**3030 Mineralogy and Materials Science** provides a review of elementary crystallography, introduction to space groups and crystal structures, bonding, properties of metals, semiconductors and insulators, crystallographic aspects of order-disorder, solid solution and mixing. Crystal growth, chemical zoning and diffusion. Phase changes in the solid state (exsolution, polymorphism and polytypism). Students will be introduced to the techniques used to study solids (X-ray diffraction, scanning and transmission electron microscopy, electron-microprobe analysis, luminescence, and computer simulation). Laboratory work will emphasize practical skills using these techniques. Examples will be chosen from among minerals, ceramics, semiconductors, metals and glass, making the course suitable for Earth Scientists, Engineers, Chemists and Physicists.

Prerequisites: Earth Sciences 2030 or equivalent; permission of instructor.

**3054 High-Temperature Geochemistry and Igneous Petrology (F)** is an integrated course dealing with the geochemistry, origin and classification of igneous rocks. Topics include trace element geochemistry; physical properties of magmas, physical and chemical processes in magma chambers (fractional crystallization, differentiation, assimilation and partial melting), phase equilibria and application to magmas, petrology of the mantle, and igneous rocks of specific tectonic settings (oceanic lithosphere, continental margins, continental lithosphere). Laboratories include geochemical calculations and examination of rock samples and thin sections.

Prerequisites: Earth Sciences 2031 and 2502.

Note: Credit may not be obtained for 3054 and the combination of 3053 and the former 2503.

**3055 Thermodynamics and Metamorphic Petrology (W)** is an integrated course dealing with the geochemistry, origin and classification of

metamorphic rocks. Topics include thermodynamic background and kinetics (transfer of mass and energy in geochemical systems of the Earth's interior, thermodynamic laws, phase equilibria, solid-solid reactions, reaction rates); metamorphic facies, field gradients, isograds and reactions; mineral assemblages and textures of common metamorphic rocks. Laboratories include thermodynamic and phase diagram problems, hand specimen and thin section studies.

Prerequisites: Earth Sciences 2031 and 2502, Mathematics 1001.

Note: *Credit may not be obtained for 3055 and the combination of 3053 and the former 2503.*

**3170 Exploration Geophysics I (W)** examines fundamentals of seismic energy transmission in the Earth; basic methods in seismic exploration - data acquisition, processing and interpretation for refraction and reflection surveys; fundamentals of gravity and magnetic data acquisition, processing and interpretation; introduction to gravity and magnetic modelling. This course has a laboratory component.

Prerequisites: Mathematics 2000 or Statistics 2510.

Prerequisite or Co-requisite: Earth Sciences 2905.

**3172 Exploration Geophysics II (F)** is an introduction to electrical and electromagnetic methods in geophysics applied in mineral exploration, petroleum well logging and environmental studies, and examples of application of various techniques; use of data processing and modelling techniques in interpretation; introduction to radiometric methods used in mineral and petroleum exploration. This course has a laboratory component.

Prerequisites: Mathematics 2000 or Statistics 2510.

Prerequisite or Co-requisite: Earth Sciences 2905.

**3179 Geophysical Analysis** covers Vector Calculus; curvilinear coordinates; line, surface and volume integration; integral theorems; the derivation and application of geophysically important partial differential equations - Laplace's equation to the Earth's gravity and magnetic fields, the diffusion equation to the Earth's heat flow, and the wave equation to electromagnetic and seismological phenomena; geophysical uses of Legendre functions; Fourier analysis in geophysics. This course has a laboratory component to familiarize the student with practical applications of the tools discussed.

Lectures: Three hours per week.

Laboratories: Three hours per week.

Prerequisites: Mathematics 2000, Physics 2055 and 2820.

**3210 Economic Mineral Deposits (W)** is an introduction to the study of mineral deposits and definition of the basic physio-chemical parameters of ore deposit formation. The course involves a systematic review of genetic models for the principal types of metallic mineral deposits, and links these models to a common theme of the relationship between lithosphere-hydrosphere-biosphere interactions and metallogeny. Laboratory exercises involve examination of representative suites of samples from different types of metallic mineral deposits and provide an introduction to the use of reflected light microscopy.

Prerequisites: EITHER Earth Sciences 2031, 2502 and 2905; OR Earth Sciences 2031 and Chemistry 3211; OR Engineering 3610 and Engineering 3205.

**3600 Environmental Geology (F)** examines the application of basic concepts and fundamental principles of geochemistry in evaluating natural and human-induced change through time on the interaction of the Earth's lithosphere, hydrosphere, atmosphere and biosphere; includes the effects of contaminants on global change. Laboratory time will be used for short field-based studies and for exercises examining the effects of contaminants on global change.

Prerequisites: EITHER Earth Sciences 2502; OR Earth Sciences 1000, Chemistry 2210 and Chemistry 2300.

**3611 Engineering Geology (W)** examines basic concepts in soil, rock and fracture mechanics; classification of soil, rock and rock masses; special topics include the engineering and environmental aspects and issues of: slope development and underground excavations in soils and rocks; the development of hydroelectric and irrigation projects; the nuclear fuel cycle; resource developments in sensitive terrains. This course includes a laboratory component.

Prerequisites: Mathematics 1001 or permission of instructor.

Note: *Credit may not be obtained for Earth Sciences 3611 and the former Earth Sciences 4611.*

**3702 Lithification, Diagenesis and Sedimentary Rock Properties** provides a conceptual and practical overview of the transformation of sediments into sedimentary rocks through compaction, cementation and mineral reactions, and the resultant modifications of rock composition, rock fabrics, and associated porous media characteristics (e.g. porosity). Both descriptive and analytical methods are integrated in laboratories that include carbonate and sandstone petrology (hand samples and thin sections), geological analysis of selected wireline logs, and the analysis of fluid reservoir properties.

Prerequisites: Earth Sciences 2031, 2702 and 2905.

**3811 Paleontology (W)** outlines the major changes in life forms from Archean times through the Phanerozoic to the present day, including details of invertebrate and vertebrate faunas and major floral groups; mechanisms and effects of mega- and micro-evolution in the fossil record; biology and classification of organisms and summaries of their geological significance in biostratigraphy, paleoecology and rock-building; relationships between major cycles of evolution and extinction to global processes. This course has a laboratory component.

Prerequisites: EITHER Biology 2120 (or Biology 1001 and 1002) and Earth Sciences 1002; OR Biology 2122 and 2210.

Note: *Credit may not be obtained for Earth Sciences 3811 and Biology 3811, or either the former Earth Sciences 3801 or Biology 3800.*

**3905 Field Methods in Structural Geology and Stratigraphy (W)** is a one credit hour course based on approximately 5 days of geological mapping in Precambrian rocks near St. John's. Emphasis is placed on application of techniques of structural analysis. Evenings will be dedicated to data analysis and preparation of structural maps and sections.

Prerequisites: Earth Sciences 2401 and 2905.

Note: *This course will be given during a special session immediately following the winter semester examination period. Students are advised to complete this course immediately following Earth Sciences 2401. Entry is by application to the Head of the Department (or delegate) only.*

#### 5.5.8.4 Fourth Year

Note: *Not all Fourth Year courses may be offered every year.*

**4053 Petrogenesis of Igneous Rocks** investigates the origin of topical and important groups of igneous rocks based on experimental petrology, phase equilibria and application of geochemical tools. It further investigates the classification of igneous rocks, including the study of volcanoclastic rocks and aspects of physical volcanology. The laboratory component of the course emphasizes practical aspects of igneous petrology including geochemical characterization and use of hand-sample and field criteria.

Prerequisite: Earth Sciences 3054.

**4054 Metamorphic Petrology** examines relationships between metamorphism and tectonics, representation and interpretation of metamorphic mineral assemblages using compositional phase diagrams and petrogenetic grids; equilibrium thermodynamics and thermobarometry; determination of P-T-t paths. Laboratories include use of the electron microprobe to collect data for use in calculations of the conditions of formation of metamorphic assemblages, and various types of software applicable to metamorphic petrology.

Prerequisites: Earth Sciences 2401 and 3055.

**4105 High Resolution Geophysics** is a senior level field based course in high resolution geophysics with an emphasis on environmental applications. Topics to be covered include Ground Probing Radar, methods in refraction seismic, high resolution magnetic surveys, microgravimetry surveys, electrical and electro-magnetic methods. This course has a laboratory component in which students conduct a series of surveys over a specific site and process and interpret the collected data.

Prerequisites: Earth Sciences 3170, 3172 and 3179.

**4171 Exploration Geophysics III** examines techniques involved in the acquisition, processing and interpretation of multichannel seismic reflection data. Introduction to elastic properties of rocks. Introduction to advanced processing and interpretation techniques as applied to qualitative and quantitative evaluation of hydrocarbon reservoir characteristics. This course has a laboratory component designed to provide hands-on experience with data processing and interpretation.

Prerequisites: Earth Sciences 3170 and 4179.

**4173 Exploration Geophysics IV** examines advanced techniques in electrical and electromagnetic exploration methods including advanced IP, airborne EM surveys, EM and IP modelling, and inversion techniques; advanced methods in gravity and magnetic field exploration techniques including 2 ½-D and 3-D modelling and inversion, map processing techniques, and excess mass determination. This course has a laboratory component.

Prerequisite: Earth Sciences 3170 or 3172; and Earth Sciences 4179.

**4179 Digital Signal Processing** is an introduction to the theory and basic computational techniques of digital signal processing in geophysics. Topics covered include: sampling, Fourier transformation, design and application of digital filters, deconvolution, spectral analysis, two dimensional signal processing, with emphasis on geophysical applications.

Prerequisite: Earth Sciences 3179.

**4211 Economic Geology** provides a detailed look at the methodologies and techniques used in the study of mineral deposits and their applications in case histories. Laboratory exercises involve solving problem sets using the various types of data from selected case studies.

Prerequisites: Earth Sciences 3054 or 3055; and Earth Sciences 3210.

**4302 Advanced Marine Geology** examines the geology and geophysics of ocean basins; discussion of methods of oceanic exploration, the history and development of ocean basins, interrelationships between ocean water, marine organisms, sedimentary and igneous processes.

Prerequisites: Earth Sciences 1001 or 1002 and completion of any 15 credit hours in core courses at the 3000 and/or 4000 levels (see General Note 5) in Biology, Biochemistry, Chemistry, Earth Sciences, Physics, or Geography.

**4310 Earth Science Concepts, Materials and Techniques for Archaeologists** - inactive course.

**4400 Advanced Techniques in Structural Geology** examines modern techniques of structural analysis applied to fold and fault systems including progressive deformation and strain analysis, fold mechanisms, fold morphology and classification, fold sections and profiles, superposed folding, fault geometry and morphology, brittle and ductile shear zones, and

construction of balanced cross-sections. This course includes a laboratory component.

Prerequisites: Earth Sciences 2401 and 3905 and a minimum of 6 credit hours in Earth Sciences at the 3000 level.

**4502 Advanced Geochemistry** focuses primarily on the application of trace, radiogenic and stable isotope geochemistry to constrain the origin, mass balance and chemical fluxes within the Earth's lithosphere and asthenosphere. The course permits students to complete assignments in aspects of geochemistry that reflect their career interests.

Prerequisites: Earth Sciences 2031 and 2502 and a minimum of 6 credit hours in Earth Sciences at the 3000 level.

**4503 Mineral Exploration Geochemistry** is an examination of the application of geochemistry to mineral exploration, covering: the lithochemical characteristics of ore deposits, their host rocks, and element dispersion from them; the principles of sampling and analysis in exploration geochemistry; approaches to the statistical analysis, graphical presentation, and interpretation of survey results; and the design of effective geochemical surveys. Particular emphasis will be placed on case studies relevant to exploration in Newfoundland and Labrador. Laboratory/seminar sessions involve working with exemplary data sets, using computer-based software for statistical analysis and software for searching large databases and viewing the spatial relationships of different types of map data relevant to the mineral exploration industry.

Prerequisite: Earth Sciences 3210.

**4601 Petroleum Origin and Occurrence** is the study of the controls on the origin, migration, accumulation and production of petroleum resources, geological and geophysical methods of exploration, and the characterization of reservoir properties. Introduction to basic concepts of the geological interpretation of well logs. This course includes a laboratory component.

Prerequisites: Earth Sciences 2702; and Earth Sciences 3170 or 3172.

**4602 Sedimentary Basins and Hydrocarbon Exploration** provides a review of sedimentary basin types and associated petroleum systems including concepts applicable to petroleum generation, migration and accumulation. Regional-scale stratigraphic and structural concepts/models are presented as a framework for hydrocarbon fluid flow and entrapment. Laboratories include description and analysis of data typical of basin- and regional-scale exploration and appraisal of hydrocarbon resources using a variety of integrated, interdisciplinary techniques (geological, geophysical and geochemical).

Prerequisites: Earth Sciences 2401, 2702 and 3170.

Note: *Credit may not be obtained for Earth Sciences 4601 and Earth Sciences 4602.*

**4603 Reservoir Characterization** provides a review of the sedimentary, stratigraphic and structural setting of hydrocarbon reservoirs and the geological controls on reservoir quality. Reservoir types and methods of study are presented to evaluate their key properties for the development and production of hydrocarbons. Laboratories include detailed subsurface correlation and mapping, log analysis, interpretation of reservoir data (e.g. capillary pressure, porosity, permeability and production data).

Prerequisites: Earth Sciences 2401, 2702, 3170 and 3702.

Note: *Credit may not be obtained for Earth Sciences 4601 and Earth Sciences 4603.*

**4610 Hydrogeology** examines geology and its relationship to groundwater occurrence and exploitation: basic theory, groundwater flow systems, surface-groundwater interactions and changes in water quality, field and laboratory techniques, hydrogeological aspects of waste disposal and resource development. This course includes a laboratory component.

Prerequisites: Earth Sciences 2502 or permission of instructor.

**4700 Sedimentary Environments and Facies Models** provides a detailed examination of recent siliciclastic sedimentary environments, their associated facies models, and application of this knowledge to understanding the origin and character of sandstone hydrocarbon reservoirs. Laboratories consist of several full-day field exercises in Proterozoic and Paleozoic rocks of the Avalon Peninsula, and core studies of reservoir facies in the Mesozoic Jeanne d'Arc Basin of the Grand Banks.

Prerequisite: Earth Sciences 2702 and a minimum of 6 credit hours in Earth Sciences at the 3000 level.

Note: *Because of the several full-day field trips (usually on Thursday) and to avoid timetable conflicts, students are strongly advised to not take courses outside the department that have contact hours on the same day as the laboratories in this course.*

## 5.6 Economics

For Departmental Regulations and Course Descriptions, see Faculty of Arts section of the Calendar.

## 5.7 Geography

For Departmental Regulations and Course Descriptions, see Faculty of Arts section in the Calendar.

### 5.7.1 Programs in Geography

The following undergraduate programs are available in the Department:

1. Major in Geography (B.A., B.Sc)
2. Honours in Geography (B.A., B.Sc)
3. Minor in Geography (B.A., B.Sc)

**4800 Advanced Paleontology** (same as Biology 4800) is a field, lecture, laboratory and seminar course dealing with selected topics in general and applied paleontology. Topics include measuring evolution and extinction, population paleontology, functional morphology, paleoecology, statistical methods for paleontological studies, and applications in petroleum, mining, and environmental studies.

Prerequisites: Earth Sciences 3811, and Statistics 2510 or Mathematics 2000.

**4901 Tectonic Regimes (F)** is a lecture and seminar course describing the tectonic regimes of the lithosphere, with emphasis on the interactions of structure, sedimentology, igneous- metamorphic petrology and paleogeography; topics covered include stress and deformation of the lithosphere, and the evolution of passive, conservative and active margins; regional examples will stress North American geology.

Prerequisites: Earth Sciences 2401 and 2702; and Earth Sciences 3054 or 3055.

Note: *Credit may not be obtained for Earth Sciences 4901 and the former Earth Sciences 4320.*

**4902 Early Evolution of the Earth (F)** - inactive course.

**4903 Global Change (W)** is a lecture and seminar course that studies the interaction of the atmosphere, biosphere and lithosphere; topics covered include the evolution of the biosphere, fluid circulation, global geochemical budget, global environmental changes, and chemical evolution of the hydrosphere.

Prerequisites: Earth Sciences 1001 or 1002, Biology 2120 or Biology 1001 and 1002 and completion of any 15 credit hours in core courses at the 3000 and/or 4000 levels (see General Note 5) in Biology, Biochemistry, Chemistry, Earth Sciences, or Physics; or permission of the instructor.

**4905 Field Course in Geological Mapping and Regional Tectonics (F)** is a two-week field school designed to allow application of techniques introduced in the third year, and to provide an introduction to the Appalachian geology of western and central Newfoundland. Reports must be submitted for grading during the fall semester. The course may be taken by others with the permission of the Head of the Department.

Prerequisites: Earth Sciences 2401, 2702, 3055 and 3905.

**4910-4920 Special Topics in Earth Sciences** are lecture and seminar courses given for undergraduates in their fourth or fifth year who wish to gain more specialized knowledge in a particular field of Earth Sciences than is possible through the standard course offerings. The Department will consider suggestions by students for Special Topics courses, but it must be borne in mind that such a course should normally be approved at least three months before the start of the semester in which it is to be taken.

Prerequisites: Permission of the Head of Department.

**4950 Technical Report on Geoscience Employment** requires the preparation of a publication-quality technical report, about 50 pages in length, based on a study undertaken during geoscience employment. The topic and scope of the study must be approved by the Head of Department prior to its commencement. The same study cannot be used as the basis of a dissertation completed for course ES499A/B. Students will present a seminar or seminars on results of the project, and will be closely advised on proper organization and writing of scientific reports. Some directed reading will be required. This course can only be used as an "additional course" under point 3. of the regulations for General degrees, and under point 4. of the regulations for Honours degrees.

Prerequisites: Completion of 9 credit hours in Earth Sciences at 3000 level, and permission of the Head of Department.

**499A and 499B Dissertation** is a 6 credit hour linked course based on independent study of an approved problem in the Earth Sciences. The subject of study will be decided in consultation with Faculty Advisors and must be approved in advance by the Head of Department. The dissertation cannot be based on the same study used to obtain credit for Earth Sciences 4950. The dissertation is obligatory for Honours students, but may be taken as Science credits by General students with permission of the Head. The first semester will normally involve directed reading, supervised laboratory work, and preparation of a dissertation outline. The second semester will be devoted to data synthesis and interpretation, and to preparation of a formal written report accompanied by appropriate illustrations, to be submitted for grading no later than a formal examination period early in the university examination schedule.



4. Joint Programs
5. Focus in Geography
6. Diploma in Geographic Information Sciences

## 5.8 Mathematics and Statistics

### 5.8.1 Programs in Mathematics and Statistics

From the point of view of degree regulations, Applied Mathematics, Pure Mathematics, and Statistics are considered to be one subject area.

The following undergraduate programs are available in the Department:

1. Major in Applied Mathematics (B.Sc. only)
  2. Major in Pure Mathematics
  3. Major in Statistics
  4. Honours in Applied Mathematics (B.Sc. only)
  5. Honours in Pure Mathematics
  6. Honours in Statistics
  7. Minor in Mathematics
  8. Minor in Statistics
  9. Pure Mathematics/Statistics Joint Honours
  10. Applied Mathematics/Computer Science Joint Major (B.Sc. only)
  11. Applied Mathematics/Economics Joint Major (B.Sc. only)
  12. Applied Mathematics/Physics Joint Major (B.Sc. only)
  13. Pure Mathematics/Computer Science Joint Major (B.Sc. only)
  14. Pure Mathematics/Economics Joint Major (B.Sc. only)
  15. Statistics/Computer Science Joint Major (B.Sc. only)
  16. Statistics/Economics Joint Major (B.Sc. only)
  17. Joint Major in Statistics and Economics (Co-operative) (B.Sc. only)
  18. Applied Mathematics/Chemistry Joint Honours (B.Sc. only)
  19. Applied Mathematics/Physics Joint Honours (B.Sc. only)
  20. Pure Mathematics/Computer Science Joint Honours (B.Sc. only)
  21. Statistics/Computer Science Joint Honours (B.Sc. only)
  22. Statistics/Biology Joint Honours (B.Sc. only)
- Details of these programs are given after the **Regulations for the Honours Degree of Bachelor of Science**.

### 5.8.2 Regulations

1. At most 9 credit hours in Mathematics will be given for courses completed from the following list subject to normal credit restrictions: Mathematics 1000, 1031, 1050, 1051, 1080, 1081, 1090, 1150 and 1151.
2. At most 6 credit hours in courses below the 2000 level can be used toward the course requirements in Mathematics and Statistics for the Major, Joint Major, Honours or Joint Honours in Applied Mathematics, Pure Mathematics or Statistics.
3. In the program descriptions that follow, Mathematics 1000 may be replaced by Mathematics 1081.
4. Credit may be obtained for only one of Statistics 2500, 2510, 2550 and Psychology 2900. Credit may be obtained for only one of Statistics 2501, 2560 (former 2511), and Psychology 2901.
5. Students with credits in Mathematics or Statistics not listed in this Calendar must consult the department for equivalency before taking any course listed below.
6. The former Mathematics 1150 and Mathematics 1151 were courses designed specifically for students who intended to graduate with a degree in Primary or Elementary Education. No other students can receive credit for these courses. These courses are not acceptable as alternatives to any other First Year Mathematics course listed in this calendar. Students who have received credit for Education 125 or Mathematics 115/125 cannot receive additional credit for the former Mathematics 1150 or Mathematics 1151 or the current Mathematics 1050 or Mathematics 1051.
7.
  - a. For the current academic year the Mathematics Placement Test (MPT) will be used to determine placement in the following courses: Mathematics 1000, Mathematics 1050, Mathematics 1051 and Mathematics 1090.
  - b. For subsequent years, students intending to register for the first time in any course below the 2000 level, must first submit a score for one of the following:
    - i. Advanced Placement Calculus Examination;
    - ii. Other standardized tests acceptable to the Department of Mathematics and Statistics.

### 5.8.3 Faculty Advisors

Each student registered in any program listed above (except for a Minor) will be assigned a Faculty Advisor. Each student's program must be planned with the advice of the Faculty Advisor before presentation to the Head of the Department or his delegate, for approval.

Note: *The Department of Mathematics and Statistics will endeavour to give appropriate advice to students registered in its programs. However, the department points out that it is the responsibility of the student to see that his or her academic program meets the University's regulations in all respects. Students are referred to the **UNIVERSITY REGULATIONS - General Academic Regulations (Undergraduate), Registration, Student Responsibility**. The department accepts no responsibility for any matter arising from an inappropriate and/or improperly recorded registration.*

### 5.8.4 Course Numbering System

All undergraduate courses offered by the Department of Mathematics and Statistics are identified to year by the first digit and to subject

area by the second digit as follows:

**First Digit**

- 1- First Year
- 2- Second Year
- 3- Third Year
- 4- Fourth and Fifth Year

**Second Digit**

- 1- Applied Mathematics
- 2- Applied Mathematics and Pure Mathematics
- 3- Pure Mathematics
- 4- Pure Mathematics and Statistics
- 5- Statistics

**5.8.5 Major in Applied Mathematics (B.Sc. Only)**

Students shall complete the following requirements:

1. Mathematics 1000, 1001, 2000, 2050, 2051, 3000, 3001, Applied Mathematics 3100, 3132, 3161, Applied Mathematics/Pure Mathematics 3202, 3260, Applied Mathematics 4160, 4190.
2. Three credit hours in Applied Mathematics courses numbered 3000 or higher.
3. A computing course, early in your program. Applied Mathematics 2120 is highly recommended.
4. A designated technical writing course offered by a Science department. Applied Mathematics 2130 is recommended. The technical writing course is prerequisite to some 3000-level courses.
5. Physics 1050 (or 1020) and 1051.
6. A statistics course. Statistics 3410 is recommended.

**5.8.6 Major in Pure Mathematics**

Students shall complete the following requirements:

1. Mathematics 1000, 1001, 2000, 2050, 2051, Pure Mathematics 2320, Mathematics 3000, Mathematics 3001, Pure Mathematics 3320;
2. One of Applied Mathematics/Pure Mathematics 3202, 3210, 3260;
3. One of Pure Mathematics 3330, 3370;
4. Twelve further credit hours in Pure Mathematics courses numbered 3000 or higher, at least 6 credit hours of which must be in courses numbered 4000 or higher;
5. A computing course. Applied Mathematics 2120 is recommended.
6. A designated technical writing course offered by a Science department. Applied Mathematics 2130 is recommended.
7. A statistics course. Statistics 3410 is recommended.

**5.8.7 Major in Statistics**

Students shall complete the following requirements:

1. Mathematics 1000, 1001, 2000, 2050, 2051, 3000, Pure Mathematics/Statistics 3410, 3411, Statistics 3520, 3521, 3530, 4590;
2. Nine further credit hours in Statistics courses numbered 3000 or higher at least 3 credit hours of which must be in a course numbered 4000 or higher excluding Statistics 4581;
3. Computer Science 2602.
4. Mathematics 3001 is recommended.

**5.8.8 Honours in Applied Mathematics (B.Sc. Only)**

See General Regulations for Honours Degree. Students shall complete the following:

1. Mathematics 1000, 1001, 2000, 2050, 2051, 3000, 3001, Applied Mathematics 2130, 3100, 3111, 3132, 3161, Applied Mathematics/Pure Mathematics 3202, 3210, 3260, Pure Mathematics/Statistics 3410, Applied Mathematics 4160, 4162, 4170, 4180, 4190, 4199;
2. A computing course early in the program is required. Applied Mathematics 2120 is recommended.
3. Physics 1050 (or 1020) and 1051, Physics 3220, and Physics 3230.
4. nine further credit hours in courses to be chosen from the following: Applied Mathematics/Pure Mathematics 3240, Pure Mathematics/Statistics 3411, Applied Mathematics 4100, Applied Mathematics 4102, Applied Mathematics 4131, Applied Mathematics 4132, Applied Mathematics 4133, Applied Mathematics 4140, Applied Mathematics 4161, Applied Mathematics/Pure Mathematics 4230, Applied Mathematics/Pure Mathematics 4240, Applied Mathematics/Pure Mathematics 4280-4290.

**5.8.9 Honours in Pure Mathematics**

See General Regulations for Honours Degree. Students shall complete the following requirements:

1. Mathematics 1000, 1001, 2000, 2050, 2051, 3000, 3001, Applied Mathematics 2130, Pure Mathematics 2320, Statistics 2510, Applied Mathematics/Pure Mathematics 3202, 3210, 3260, Pure Mathematics 3300, 3301, 3320, 3330, 4300, 4310, 4399;
2. Either Pure Mathematics 3340 or 3370;
3. Either Pure Mathematics 4320 or 4321;
4. Twelve further credit hours in Pure Mathematics courses numbered 3000 or higher, at least 9 credit hours of which must be in courses numbered 4000 or higher;
5. A computing course early in the program is required. Applied Mathematics 2120 is recommended.

**5.8.10 Honours in Statistics**

See General Regulations for Honours Degree. Students shall complete the following requirements:

1. Mathematics 1000, 1001, 2000, 2050, 2051, 3000, 3001, Applied Mathematics/Pure Mathematics 3202, 3210, Pure Mathematics/Statistics 3410, 3411, Statistics 3520, 3521, 3530, Pure Mathematics/Statistics 4410, Statistics 4590, 4599;
2. Eighteen further credit hours in Statistics courses including at least 12 credit hours in courses numbered 4000 or higher excluding

Statistics 4581;

- Computer Science 2602, Computer Science 3731.
- Pure Mathematics/Statistics 4400 and Pure Mathematics/Statistics 4401 are recommended.

### 5.8.11 Minor in Mathematics

A total of 24 credit hours in courses offered by the Department of Mathematics and Statistics is required of which only 6 credit hours shall be in courses at the 1000 level and at least 6 credit hours shall be in courses numbered 3000 or higher.

### 5.8.12 Minor in Statistics

The courses required for a minor in Statistics are:

- Mathematics 1000, 1001; Statistics 2500 or 2510, Statistics 2501 or 2560.
- Twelve further credit hours in Statistics courses numbered 3000 or higher excluding Statistics 4581.

It is recommended that Mathematics 2000 and Mathematics 2050 be taken since they are prerequisite to several further Statistics courses.

### 5.8.13 Course List

In accordance with Senate's *Policy Regarding Inactive Courses*, the course descriptions for courses which have not been offered in the previous three academic years and which are not scheduled to be offered in the current academic year have been removed from the following listing. For information about any of these inactive courses, please contact the Head of the Department.

In the descriptions of the courses which follow, the symbol (F) represents the Fall and (W) represents Winter. These labels are intended to indicate the semester when the course is generally offered. Unlabelled courses are offered as demand or programs dictate and as resources permit. The department tries to offer a variety of 1000-, 2000- and 3000-level courses during the spring semester (or intercession or summer session) every year. Students are encouraged to consult the department regularly for specific planned offerings, semester by semester.

#### 5.8.13.1 Foundation Courses

**102F, 103F and 104F Mathematics Skills Program** are non-credit courses intended for those students who either have a weak background in mathematics or are returning to the subject after some years. The program enables students to master mathematical operations such as those involving whole numbers, fractions, decimals, percents, integers, exponents, linear equations, algebraic and rational expressions, formulas, graphs, systems of linear equations, basic trigonometry, exponents and radicals, and quadratics.

#### 5.8.13.2 Common Core Mathematics Courses

**1000 Calculus I (F) & (W)** is an introduction to differential Calculus including logarithmic, exponential and trigonometric functions.  
Four hours per week.  
Prerequisite: Mathematics 1090 or a combination of placement test and high school Mathematics scores acceptable to the department.  
Note: *Effective Winter 2000, the credit restriction between Mathematics 1000 and Mathematics 1080 has been lifted. However, credit cannot be obtained for both Mathematics 1000 and Mathematics 1081.*

**1001 Calculus II (F) & (W)** is an introduction to integral Calculus with applications. In addition to three lectures per week there will be a one and one-half hour problem lab.  
Prerequisite: Mathematics 1000 or 1081.  
Note: *Credit cannot be obtained for both Mathematics 1001 and either Engineering 1411 or Engineering 2413.*

**1031 Mathematical Problem Solving** - inactive course.

**1050 Finite Mathematics I (F) & (W)** covers topics which include sets, logic, permutations, combinations and elementary probability.  
Four hours per week.  
Prerequisite: A combination of placement test and high school mathematics scores acceptable to the department or Mathematics 103F.  
Notes: 1. *With the exception of those already admitted at the time of registration in this course to a B.Ed. program that requires this course, students who already have obtained credit for six or more Mathematics credit hours numbered 2000 or above are not permitted to register for this course nor can they receive credit for it.*  
2. *Credit cannot be obtained for Mathematics 1050 and the former Mathematics 1150.*

**1051 Finite Mathematics II (F) & (W)** covers topics which include elementary matrices, linear programming, elementary number theory, mathematical systems, and geometry.  
Four hours per week.  
Prerequisite: A combination of placement test and high school mathematics scores acceptable to the department or Mathematics 103F.  
Notes: 1. *With the exception of those already admitted at the time of registration in this course to a B.Ed. program that requires this*

*course, students who already have obtained credit for six or more Mathematics credit hours numbered 2000 or above are not permitted to register for this course nor can they receive credit for it.*

- Credit cannot be obtained for Mathematics 1051 and the former Mathematics 1151.*

**1090 Algebra and Trigonometry (F) & (W)** provides students with the essential prerequisite elements for the study of an introductory course in calculus. Topics include algebra, functions and their graphs, exponential and logarithmic functions, trigonometry, polynomials, and rational functions.  
Four hours per week.  
Prerequisite: A combination of placement test and high school Mathematics scores acceptable to the department or Mathematics 104F.  
Note: *Students will not receive credit for Mathematics 1090 if they have previously received credit or are currently registered for Mathematics 1000, 1001, 1080, or 1081.*

**2000 Calculus III (F) & (W)** is a study of the differential calculus of functions of two variables, an introduction to convergence of infinite sequences and series. In addition to three lectures per week there will be a one and one-half hour problem lab.  
Prerequisite: Mathematics 1001.  
Note: *Credit cannot be obtained for both Mathematics 2000 and any of Engineering 1411, Engineering 1412, Engineering 2412, Engineering 2413.*

**2050 Linear Algebra I (F) & (W)** includes the topics: Euclidean  $n$ -space, vector operations in 2- and 3-space, complex numbers, linear transformations on  $n$ -space, matrices, determinants, and systems of linear equations.  
Prerequisite: Mathematics 1000 or six credit hours in first year Mathematics courses.  
Note: *Credit cannot be obtained for both Mathematics 2050 and Engineering 2402.*

**2051 Linear Algebra II (F) & (W)** includes the topics: real and complex vector spaces, basis, dimension, change of basis, eigenvectors, inner products, and diagonalization of Hermitian matrices.  
Prerequisite: Mathematics 2050.

**2075 Introduction to the History of Mathematics** - inactive course.

**2090 Mathematics of Finance** covers the topics: simple and compound interest and discount, forces of interest and discount, equations of value, annuities and perpetuities, amortization schedules and sinking funds, bonds and other securities, contingent payments.  
Prerequisite: Mathematics 1001.

**2091 Introduction to Actuarial Mathematics** covers life tables, life annuities, life insurance, multi-life theory, stationary population, interest rates as a random variable.  
Prerequisites: Mathematics 2090 and one of Statistics 2500, 2510, 2550.

**3000 Real Analysis I (F) & (W)** covers proof techniques, structure of the real numbers, sequences, limits, continuity, uniform continuity, differentiation.  
Three lecture hours and one laboratory hour per week.  
Prerequisite: Mathematics 2000.  
Note: *Credit can be obtained for only one of Mathematics 3000 and the former Mathematics 2001.*

**3001 Real Analysis II (F) & (W)** examines Infinite series of constants, sequences and series of functions, uniform convergence and its consequences, power series, Taylor series, Weierstrass Approximation Theorem.  
Three lecture hours and one laboratory hour per week.  
Prerequisite: Mathematics 3000.  
Note: *Credit cannot be received for both of Mathematics 3001 and the former Applied Mathematics/Pure Mathematics 3201.*

#### 5.8.13.3 Applied Mathematics Courses

**2120 Introduction to Mathematical Programming (F)** serves as an

introduction to the use of computers in mathematics. Algorithm design, structured programming and symbolic computing are the main subject areas treated. The structured programming, using a high-level computer language such as C, includes floating point arithmetic, data types, loops, conditional branching, functions, formatted I/O and modularity. The programming in a symbolic environment uses a package like Maple or Mathematica. All programming focuses on problems related to mathematics.

Prerequisite: Mathematics 1000 or 1081.

Note: *First priority for enrolment in this course is given to students whose majors are in mathematics or statistics. Other students wishing to register must obtain permission from the head of department. Students enrolled in any program within the Department of Mathematics and Statistics who have completed or are currently registered for Applied Mathematics 2130, Computer Science 2710 or Computer Science 2602 cannot receive credit for Applied Mathematics 2120.*

**2130 Technical Writing in Mathematics (W)** is a project oriented course combining mathematical investigation and technical writing. By using computer programming, graphical and typesetting tools, students will explore mathematical concepts and will produce technical reports of professional quality. The latter will combine elements of writing and graphics to convey technical ideas in a clear and concise manner.

Prerequisite: Mathematics 1001 and (Applied Mathematics 2120 or Computer Science 2710 or 2602 or permission of the Head of Department).

Notes: 1. *First priority for enrolment in this course is given to students who are Applied or Pure Mathematics majors. Other students wishing to register should direct inquiries to the head of department.*

2. *This course qualifies as a Research/Writing course in the Faculty of Arts.*

**3100 Introduction to Dynamical Systems (W)** examines flows, stability, phase plane analysis, limit cycles, bifurcations, chaos, attractors, maps, fractals. Applications throughout.

Three lecture hours per week.

Prerequisites: Applied Mathematics/Pure Mathematics 3260 and a technical writing course offered by a Science department (Applied Mathematics 2130 is recommended).

Note: *Credit can be obtained for only one of Applied Mathematics 3100 and the former 3190.*

**3111 Applied Complex Analysis** examines mapping by elementary functions, conformal mapping, applications of conformal mapping, Schwarz-Christoffel transformation, Poisson integral formula, poles and zeros, Laplace transforms and stability of systems, analytic continuation.

Prerequisite: Applied Mathematics/Pure Mathematics 3210.

**3132 Numerical Analysis I (W)** is an introduction to numerical analysis, round-off error, iterative methods for nonlinear equations in one variable, interpolation and polynomial approximation, discrete least-squares approximation, numerical differentiation and integration.

Prerequisites: Applied Mathematics 2130 and Applied Mathematics/Pure Mathematics 3260.

Note: *Credit cannot be obtained for both Applied Mathematics 3132 and Computer Science 3731.*

**3161 Ordinary Differential Equations II (F)** examines power series solutions, method of Frobenius, Bessel functions, Legendre polynomials and others from classical Physics, systems of linear first order equations, fundamental matrix solution, numerical methods for initial value problems, existence and uniqueness of solutions.

Prerequisites: Applied Mathematics/Pure Mathematics 3202 and Applied Mathematics/Pure Mathematics 3260.

**3202 Vector Calculus (F) & (W)** deals with functions of several variables, Lagrange multipliers, vector valued functions, directional derivatives, gradient, divergence, curl, transformations, Jacobians, inverse and implicit function theorems, multiple integration including change of variables using polar, cylindrical and spherical co-ordinates, Green's theorem, Stokes' theorem, divergence theorem, line integrals, arc length.

Prerequisite: Mathematics 2000 and 2050.

Note: *Credit cannot be obtained for both Applied Mathematics/Pure Mathematics 3202 and Physics 3810.*

**3210 Introduction to Complex Analysis (F)** examines complex numbers, analytic functions of a complex variable, differentiation of complex functions and the Cauchy-Riemann equations, complex integration, Cauchy's theorem, Taylor and Laurent series, residue theory and applications.

Prerequisite: Mathematics 3000.

**3240 Applied Graph Theory (F)** examines algorithms and complexity, definitions and basic properties of graphs, Eulerian and Hamiltonian chains, shortest path problems, graph coloring, planarity, trees, network flows, with emphasis on applications including scheduling problems, tournaments, and facilities design.

Prerequisite: Pure Mathematics 2320.

Note: *Credit cannot be obtained for both Applied Mathematics/Pure Mathematics 3240 and Computer Science 2741.*

**3260 Ordinary Differential Equations I (F) & (W)** examines direction fields, equations of first order and first degree, higher order linear equations, variation of parameters, methods of undetermined coefficients, Laplace transforms, systems of differential equations. Applications include vibratory motion, satellite and rocket motion, pursuit problems, population models and chemical kinetics.

Prerequisite: Mathematics 2000.

Note: *Credit cannot be obtained for both Applied Mathematics/Pure Mathematics 3260 and Engineering 3411.*

**4100 Applied Functional Analysis** - inactive course.

**4102 Stochastic Methods in Applied Mathematics** - inactive course.

**4131 Numerical Linear Algebra** - inactive course.

**4132 Introduction to Optimization** is an introduction to optimization, analytic methods for functions of one variable and for functions of several variables, classical maxima and minima, necessary and sufficient conditions, constrained optimization, equality and inequality constraints, Kuhn-Tucker conditions, introduction to the calculus of variations, linear programming, simplex algorithm.

Prerequisite: Applied Mathematics/Pure Mathematics 3260 and Applied Mathematics/Pure Mathematics 3202.

**4133 Numerical Optimization** - inactive course.

**4140 Introduction to Mathematical Control Theory** - inactive course.

**4160 Partial Differential Equations I (F)** covers two point boundary value problems, Fourier series, Sturm-Liouville theory, canonical forms, classification and solution of linear second order partial differential equations in two independent variables, separation of variable, integral transform methods.

Prerequisites: Applied Mathematics/Pure Mathematics 3202 and Applied Mathematics/Pure Mathematics 3260.

**4161 Integral Equations** - inactive course.

**4162 Numerical Methods for Partial Differential Equations** cover finite differences, finite elements, discretization schemes, stability analysis. Application to parabolic, elliptic and hyperbolic problems.

Prerequisite: Applied Mathematics 3132, 4160.

**4170 Partial Differential Equations II** covers first order equations, Cauchy problems, Cauchy-Kowalewska theorem, second order equations, canonical forms, wave equations in higher dimensions, method of spherical means, Duhamel's principle, potential equation, Dirichlet and Neuman problem, Green's function and fundamental solution, potential theory, heat equation, Riemann's method of integration, method of plane and Riemann waves for systems of PDEs of the first order.

Prerequisite: Applied Mathematics 4160.

**4180 Introduction to Fluid Dynamics** (same as Physics 4205) covers basic observations, mass conservation, vorticity, stress, hydrostatics, rate of strain, momentum conservation (Navier-Stokes equation), simple viscous and inviscid flows, Reynolds number, boundary layers, Bernoulli's and Kelvin's theorems, potential flows, water waves, thermodynamics.

Prerequisites: Physics 3220 and either Applied Mathematics 4160 or Physics 3821.

**4190 Mathematical Modelling (W)** is intended to develop students' skills in mathematical modelling and competence in oral and written presentations. Case studies in modelling will be analyzed. Students will develop a mathematical model and present it in both oral and report form.

Prerequisites: Applied Mathematics 3100, Applied Mathematics 3161 and Applied Mathematics 4160.

**4199 Applied Mathematics Honours Project** requires the student, with supervision by a member of the department, to prepare a dissertation in an area of Applied Mathematics. Although original research work by the student will not normally be expected, the student must show an ability and interest to learn and organize material independently. A one hour presentation at the end of the semester will be given by the student.

Prerequisite: Registration in an Honours or Joint Honours program in Applied Mathematics.

**4230 Differential Geometry** covers theory of curves, Frenet relations, curvature and torsion, singular points of curves, first and second quadratic forms, classification of points on a surface, Gaussian curvature, Gauss-Weingarten theorem, Christoffel's symbols, theorema Egregium, Gauss-Cadazzi-Mainardi theorem, internal geometry of surfaces, isometric and conformal mappings, geodesic curvature and torsion, parallel displacement, Gauss-Bonnet theorem.

Prerequisite: Applied Mathematics/Pure Mathematics 3202.

**4240 Differential and Integral Calculus on Manifolds** - inactive course.

**4280-4290 Special Topics in Pure and Applied Mathematics**

Prerequisite: Permission of Head of Department.

Note: *Consult the department for a list of titles and information regarding availability.*

### 5.8.13.4 Pure Mathematics Courses

**2320 Discrete Mathematics (F) & (W)** covers basic concepts of mathematical reasoning, sets and set operations, functions, relations including equivalence relations and partial orders as illustrated through the notions of congruence and divisibility of integers, mathematical induction, principles of counting, permutations, combinations and the Binomial Theorem.

Prerequisite: Mathematics 1001 or 2050.

Note: *Credit cannot be obtained for both Pure Mathematics 2320 and*

Computer Science 2740.

**3202 Vector Calculus (F) & (W)** see Applied Mathematics 3202.

**3210 Introduction to Complex Analysis** see Applied Mathematics 3210.

**3240 Applied Graph Theory** see Applied Mathematics 3240.

**3260 Ordinary Differential Equations I** see Applied Mathematics 3260.

**3300 Set Theory** is an introduction to Mathematical Logic, functions, equivalence relations, equipotence of sets, finite and infinite sets, countable and uncountable sets, Cantor's Theorem, Schroeder-Bernstein Theorem, ordered sets, introduction to cardinal and ordinal numbers, logical paradoxes, the axiom of choice.  
Prerequisite: Mathematics 3000.

**3301 Integration and Metric Spaces** is a brief review of the Riemann integral, Riemann-Stieltjes integration, metric spaces, the Baire Category Theorem, uniform continuity, the Banach Contraction principle, the Weierstrass Approximation Theorem and the Stone-Weierstrass Theorem are covered.  
Prerequisite: Mathematics 3001.

**3303 Introductory Geometric Topology** - inactive course.

**3320 Abstract Algebra (F)** is an introduction to groups and group homomorphisms including cyclic groups, cosets, Lagrange's theorem, normal subgroups and quotient groups, introduction to rings and ring homomorphisms including ideals, prime and maximal ideals, quotient rings, integral domains and fields.  
Prerequisite: Pure Mathematics 2320.

**3321 Applied Algebra** - inactive course.

**3330 Euclidean Geometry (F)** is classical Euclidean geometry of the triangle and circle, the inversion transformation, including the theorem of Feuerbach. Elliptic and hyperbolic geometries.  
Prerequisite: Pure Mathematics 2320 or Mathematics 2051.

**3331 Projective Geometry** includes course topics: projective space, the principle of duality, mappings in projective space, conics and quadrics.  
Prerequisite: Pure Mathematics 2320 or Mathematics 2051.

**3340 Introductory Combinatorics (W)** includes topics: distributions, the binomial and multinomial theorems, Stirling numbers, recurrence relations, generating functions and the inclusion-exclusion principle. Emphasis will be on applications.  
Prerequisite: Pure Mathematics 2320.

**3370 Introductory Number Theory (F)** examines perfect numbers and primes, divisibility, Euclidean algorithm, greatest common divisors, primes and the unique factorization theorem, congruences, cryptography (secrecy systems), Euler-Fermat theorems, power residues, primitive roots, arithmetic functions, Diophantine equations, topics above in the setting of the Gaussian integers.  
Prerequisite: Pure Mathematics 2320.

**3410 Mathematical Statistics I (F)** covers basic probability concepts, combinatorial analysis, conditional probability, independence, random variable, distribution function, mathematical expectation, Chebyshev's inequality, distribution of two random variables, binomial and related distributions, Poisson, gamma, normal, bivariate normal,  $t$ , and  $F$  distributions, transformations of variables including the moment-generating function approach.  
One and a half hour tutorial period weekly.  
Prerequisite: Mathematics 2000.

**3411 Mathematical Statistics II (W)** examines sampling distributions. Limiting distributions, central limit theorem, minimum variance unbiased estimators, confidence intervals, MLE and its asymptotic properties, exponential family, sufficient statistics, Rao-Cramér inequality, efficiency, Neyman-Pearson lemma, chi-square tests, likelihood ratio test.  
One and a half hour tutorial period weekly.  
Prerequisite: Pure Mathematics/Statistics 3410.

**4230 Differential Geometry** see Applied Mathematics 4230.

**4240 Differential and Integral Calculus on Manifolds** see Applied Mathematics 4240.

**4280-4290 Special Topics in Pure and Applied Mathematics**

Prerequisite: Permission of Head of Department.

Note: Consult the department for a list of titles and information regarding availability.

**4300 General Topology** examines topological structure on a set, neighborhood, open and closed sets, continuity, sub-spaces and quotient spaces, connectedness, relation between topologies, base and sub-base, product spaces, applications to Euclidean spaces. Hausdorff, regular, normal and compact spaces, metric spaces, compacta and continua, metrization.  
Prerequisite: Pure Mathematics 3300 or 3301, or both Mathematics 3000 and Pure Mathematics 3303.

**4301 Algebraic Topology** - inactive course.

**4302 Functional Analysis** - inactive course.

**4310 Complex Function Theory** examines topology of  $\mathbb{C}$ , analytic functions, Cauchy's theorem with proof, Cauchy integral formula, singularities, argument principle, Rouché's theorem, maximum modulus principle, Schwarz's lemma, harmonic functions, Poisson integral formula, analytic continuation, entire functions, gamma function, Riemann-Zeta function, conformal mapping.  
Prerequisite: Pure Mathematics 3301 and Applied Mathematics/Pure Mathematics 3210.

**4320 Ring Theory** examines factorization in integral domains, structure of finitely generated modules over a principal ideal domain with application to Abelian groups, nilpotent ideals and idempotents, chain conditions, the Wedderburn-Artin theorem.  
Prerequisite: Pure Mathematics 3320.

**4321 Group Theory** examines permutation groups, Sylow theorems, normal series, solvable groups, solvability of polynomials by radicals, introduction to group representations.  
Prerequisite: Pure Mathematics 3320.

**4331 Galois Theory** - inactive course.

**4340 Combinatorial Analysis** continues most of the topics started in Pure Mathematics 3340 with further work on distributions, recurrence relations and generating functions. Generating functions are used to solve recurrence relations in two variables. Also included is a study of Polyá's theorem with applications.  
Prerequisite: Mathematics 2000 and Pure Mathematics 3340.

**4341 Combinatorial Designs** includes the study of finite fields, Latin squares, finite projective planes and balanced incomplete block designs.  
Prerequisite: Pure Mathematics 3320 or 3340.

**4370 Number Theory** - inactive course.

**4375 History of Mathematics** - inactive course.

**4399 Pure Mathematics Dissertation** requires the student, with supervision by a member of the department, to prepare a dissertation in an area of Pure Mathematics. Although original research by the student will not normally be expected, the student must show an ability and interest to learn and organize material independently. A one hour presentation at the end of the semester will be given by the student.  
Prerequisite: Registration in an Honours or Joint Honours program in Pure Mathematics.

**4400 Lebesgue Integration** is a review of Riemann integration, outer measure, measure, measurable sets, measurable functions, the Lebesgue integral, properties of the Lebesgue integral, sequences of integrals, Fubini's theorem.  
Prerequisite: Mathematics 3001.

**4401 Probability Theory** examines abstract measure and integration, probability concepts, random variables, independence, Borel-Cantelli lemmas, sums of independent random variables.  
Prerequisite: Mathematics 3000 and Pure Mathematics/Statistics 3410.

**4402 Stochastic Processes** - inactive course.

**4410 Mathematical Statistics III** examines multivariate normal distribution theory, applications to ANOVA and regression, other topics such as sequential tests, distribution of order statistics, nonparametrics and decision theory.  
Prerequisite: Mathematics 2051 and Pure Mathematics/Statistics 3411.

### 5.8.13.5 Statistics Courses

Note: All 2000 level statistics courses, Statistics 3410, 3411, 4590, and 4591 have a laboratory period weekly.

**2500 Statistics for Business and Arts Students (F) & (W)** covers descriptive statistics (including histograms, stem-and-leaf plots and box plots), elementary probability, discrete random variables, the binomial distribution, the normal distribution, sampling distribution, estimation and hypothesis testing including both one and two sample tests, paired comparisons, chi-square test, correlation and regression. Related applications.  
Prerequisite: Mathematics 1000 or 6 credit hours in first year courses in Mathematics or registration in at least semester 3 of a B.N. program or permission of the head of department.

Note: Credit can be obtained for only one of Statistics 2500, 2510, 2550, and Psychology 2900. Statistical computer package will be used in the laboratory, but no prior computing experience is assumed.

**2501 Further Statistics for Business and Arts Students (F)** covers power calculation and sample size determination, analysis of variance, multiple regression, nonparametric statistics, index numbers, time series analysis, introduction to sampling techniques.  
Prerequisite: Statistics 2500 or 2510.

Note: Credit can be obtained for only one of Statistics 2501, 2560, the former 2511, and Psychology 2901. Statistical computer package will be used in the laboratory.

**2510 Statistics for Physical Science Students (F) & (W)** examines elements of probability, conditional probability, Bayes' Theorem, discrete random variables, cumulative distribution function, introduction to continuous random variables, mathematical expectation, estimation of mean, proportion

and variance, hypothesis testing for one-sample case.

Prerequisite: Mathematics 1000 or 1081.

Note: *Credit can be obtained for only one of Statistics 2500, 2510, 2550, Psychology 2900, and Engineering 3423. Normally offered twice a year, including the fall.*

**2550 Statistics for Life Science Students (F) & (W) & (S)** is an introduction to basic statistics methods with an emphasis on applications to life sciences and, in particular, to biology. Material includes descriptive statistics, elementary probability, binomial distribution, normal distribution, sampling distribution, estimation and hypothesis testing (both one and two sample cases), chi-square test, one way analysis of variance, correlation and simple linear regression.

Prerequisite: Mathematics 1000 or 1081.

Note: *Credit can be obtained for only one of Statistics 2500, 2510, 2550, and Psychology 2900. Statistical computer package will be used in the laboratory, but no prior computing experience is assumed.*

**2560 Further Statistics for Science Students (W)** (former 2511) covers estimation and hypothesis testing in the two-sample and paired sample cases, one way and two way analysis of variance, simple and multiple linear regression, chi-square tests, non-parametric tests including sign test, Wilcoxon signed rank test and Wilcoxon rank test.

Prerequisite: Statistics 2500 (with Mathematics 1000 or 1081) or Statistics 2510.

Note: *Credit can be obtained for only one of Statistics 2501, 2560, the former 2511, and Psychology 2901. Statistical computer packages will be used in the laboratory, but no prior computing experienced is assumed.*

**3410 Mathematical Statistics I** see Pure Mathematics 3410

**3411 Mathematical Statistics II** see Pure Mathematics 3411

**3520 Experimental Design I (F)** is an introduction to basic concepts in experimental design, single factor designs including completely randomized, randomized blocks, Latin square and related designs, multiple comparison tests, fixed and random effects models, introduction to factorial design.

Prerequisite: Mathematics 2050 and either Pure Mathematics/Statistics 3411 or both 1001 and one of Statistics 2501 or 2560 (former 2511).

Note: *Credit cannot be obtained for both Statistics 3520 and Psychology 3900.*

**3521 Regression (W)** covers inferences in linear regression analysis, matrix approach to regression analysis, multiple linear regression, model selection, polynomial regression, indicator variable, problem of simultaneous inferences, multicollinearity.

Prerequisite: Mathematics 2050 and either Pure Mathematics/Statistics 3411 or both Mathematics 1001 and one of Statistics 2501 or 2560 or the former 2511.

**3530 Survey Sampling I (F)** covers basic concepts, randomization, sampling frames, stratified sampling, the analysis of subclasses, cluster sampling, stratified cluster sampling, unequal clusters, ratio estimates selection with probabilities proportional to size.

Prerequisite: Either Pure Mathematics/Statistics 3411 or both Mathematics 1001 and one of Statistics 2501 or 2560 or the former 2511.

**3540 Time Series I** covers Autocovariance, autocorrelation and correlation, stationarity, autoregressive, moving average and ARMA models, differencing, the integrated ARMA process, parameter estimation, model identification and diagnostic testing, forecasting, seasonal models, the use of data transformation.

Prerequisite: Either Pure Mathematics/Statistics 3411 or both Mathematics 1001 and one of Statistics 2501 or 2560 or the former 2511.

**3570 Reliability and Quality Control** is an analysis of life, mortality and failure data, standard parametric models in reliability, quality control charts and cumulative sum charts, tolerance limits, contingency tables, interactions, application of sequential sampling.

Prerequisite: Either Pure Mathematics/Statistics 3411 or both Mathematics 1001 and one of Statistics 2501 or 2560 or the former 2511.

**3590 Statistics in Applied Research** - inactive course.

**4400 Lebesgue Integration** see Pure Mathematics 4400

**4401 Probability Theory** see Pure Mathematics 4401

**4402 Stochastic Processes** see Pure Mathematics 4402

**4410 Mathematical Statistics III** see Pure Mathematics 4410

**4520 Experimental Design II (W)** covers selected topics in ANOVA and ANCOVA including factorial experiments and unbalanced designs.

Prerequisite: Statistics 3520.

**4530 Survey Sampling II (W)** covers area sampling, multi-stage sampling, two-phase sampling, ratio, regression and difference estimates, composite sampling designs, sampling from imperfect frames, bias and non-sampling errors.

Prerequisites: Mathematics 2000 and Statistics 3530.

**4540 Time Series II** is an analysis of time series in the time domain, including stationary and non-stationary processes, autocovariance kernels and their estimators, analysis of autoregressive and moving average models, spectral analysis including the power spectrum and its estimators, periodogram, smoothed and filtered estimators.

Prerequisite: Pure Mathematics/Statistics 3411 and Statistics 3540.

**4550 Non-parametric Statistics** covers inferences concerning location based on one sample, paired samples or two samples, inferences concerning scale parameters, goodness-of-fit tests, association analysis, tests for randomness.

Prerequisites: one of Statistics 3520 or 3521, or Pure Mathematics/Statistics 3411.

**4560 Continuous Multivariate Analysis** examines the multivariate normal distribution and its marginal and conditional distributions, properties of the Wishart distribution, Hotelling's T-squared statistic, a selection of techniques chosen from among MANOVA, multivariate regression, principal components, factor analysis, discrimination and classification, clustering.

Prerequisite: Mathematics 2051, Pure Mathematics/Statistics 3410 and one of Statistics 3520, or Pure Mathematics/Statistics 3411, or Statistics 3521.

**4561 Discrete Multivariate Analysis** is an analysis of cross-classified categorical data, chi-square test, measures of association, multidimensional contingency tables, hypotheses of partial and conditional independence, log-linear models for Poisson, multinomial and product-multinomial sampling schemes, iterative scaling technique for maximum likelihood estimation, step-wise model selection procedures, partitioning chi-square, explanatory and response variables in contingency tables, logit models.

Prerequisite: Statistics 3520 or 3521.

**4580 History of Statistics** - inactive course.

**4581 Quantitative Methods in Biology** - inactive course.

**4585 Computational Statistics** is an introduction to modern computational statistics, using a statistical programming language, such as S-Plus. Emphasis is placed on use of the computer for numerical and graphical exploratory data analysis, and on crafting programs to accomplish specialized statistical procedures.

Prerequisites: Mathematics 2000, Statistics 3520, 3521. Applied Mathematics/Pure Mathematics 2130 is recommended.

**4590 Statistical Analysis of Data I** is for users of Statistics with emphasis placed on computer analysis of statistical problems drawn from various disciplines, descriptive statistics, analysis of univariate measurement data, chi-square tests, non-parametric tests, basic ANOVA and regression.

Prerequisite: one of Statistics 3520, or 3521, or Pure Mathematics/Statistics 3411.

**4591 Statistical Analysis of Data II** - inactive course.

**4599 Honours Comprehensive with Directed Readings** is a directed reading course with Comprehensive examination for students in Honours or Joint Honours Degree programs in Statistics ONLY.

Prerequisite: Registration in an Honours or Joint Honours program in Statistics.

## 5.9 Physics and Physical Oceanography

### 5.9.1 Programs in Physics

The following undergraduate programs are available in the Department:

1. Major in Physics
2. Honours in Physics
3. Major in Environmental Physics
4. Honours in Environmental Physics
5. Applied Mathematics/Physics Joint Honours
6. Applied Mathematics/Physics Joint Major
7. Physics/Biochemistry Joint Honours
8. Physics/Chemistry Joint Honours

9. Physics/Computer Science Joint Honours
10. Physics/Computer Science Joint Major
11. Physics/Earth Sciences Joint Honours
12. Geophysics/Physical Oceanography Joint Honours
13. Physics/Earth Sciences Joint Major
14. Minor in Physics

Details of these joint programs are given after the **Regulations for the Honours Degree of Bachelor of Science**. Other joint programs may be arranged in consultation with the departments concerned.

- Notes:
1. *The attention of students intending to follow any one of the programs listed above is drawn to the University Regulations governing the appropriate degree. Additional Departmental requirements are given below.*
  2. *Faculty advisors are available to provide advice to students who are registered in, or who are considering registering in, any of the programs. Students are urged to consult with these advisors at their earliest opportunity in order to ensure that they select appropriate courses and programs. Students with credits in Physics courses which are not listed in this calendar should consult with the Department.*
  3. *The six course stream consisting of Physics 1050, 1051, 2053, 2055, 2750, and 2820 or alternatively the seven course stream of Physics 1020, 1050, 1051, 2053, 2055, 2750, and 2820 is intended to provide a cohesive overview of Physics for potential Physics majors.*
  4. *Physics 1050 is open to and recommended for students who have completed Level II Physics, Level III Physics and Level III Advanced Mathematics. Mathematics 1000 must be taken at the same time as, or be completed prior to, taking Physics 1050. However, under certain circumstances, students enrolled in Mathematics 1090, will be allowed to register for Physics 1050 with the permission of the Department of Physics and Physical Oceanography. Students who have completed Mathematics 1090 and Physics 1050, however, are required to complete Mathematics 1000 before registering for Physics 1051.*
  5. *Physics 1020 is intended for students who do not qualify for Physics 1050, and while it may be taken by students who have no background in Physics it is recommended that students wishing to take Physics 1020 should have completed at least one of Level II and Level III Physics. Students who complete Physics 1020 and Mathematics 1000 are eligible for admission to Physics 1051. Students may receive credit for only one of Physics 1050 and 1020.*
  6. *Students who have successfully completed Advanced Placement courses in both Physics and Mathematics will normally be eligible for direct entry into Physics 1051, 2053 and 2750, all of which are offered in the Fall semester. Such students are advised to consult the Department.*
  7. *Where circumstances warrant, any prerequisites listed below may be waived by the Head of the Department.*
  8. *Supplementary examinations will be allowed in certain Physics courses which have written final examinations. Students should refer to the Faculty of Science Degree regulations for details.*

## 5.9.2 Minor in Physics

A minor in Physics will consist of 24 credit hours in Physics courses which must include Physics 1050 (or 1020), 1051, 2053, 2055, 2750, 2820. Only 6 credit hours at the 1000 level can be used to fulfill the 24 credit hours. For those students whose major is Chemistry or Biochemistry, the 24 credit hours in Physics will not include 2053.

## 5.9.3 Major in Physics

1. English 1080 and English 1110 (or equivalent).
2. Chemistry 1050 and 1051 (or Chemistry 1010, 1011, and 1031).
3. Mathematics 1000 and 1001.
4. Mathematics 2000, Mathematics 2050 and Applied Mathematics/Pure Mathematics 3260.
5. Physics 1050 (or 1020) and 1051.
6. Physics 2053, 2055, 2750, 2820, 3220, 3400, 3500, 3750 and 3900.
7. An additional 12 credit hours in physics courses numbered 3000 or higher which shall include at least 6 credit hours selected from the courses numbered Physics 3000, 3150, 3300, 3410, 3550, 3600, 3751.
8. Physics 3810 or Applied Mathematics/Pure Mathematics 3202.

Mathematics 1001, 2000 and 2050 are prerequisites to many Physics courses and should be completed by the end of second year. Applied Mathematics/Pure Mathematics 3260 is co-requisite to Physics 3220 and should be completed before the winter of the third year. Those who intend to make a career in Physics should note that additional Physics courses are strongly recommended. Computer Science 2602 and Mathematics 2051 are also recommended.

## 5.9.4 Honours in Physics

1. English 1080 and English 1110 (or equivalent).
2. Chemistry 1050 and 1051 (or Chemistry 1010, 1011, and 1031).
3. Mathematics 1000 and 1001.
4. Mathematics 2000, 2050 and Applied Mathematics/Pure Mathematics 3260.
5. Physics 1050 (or 1020) and 1051.
6. Physics 2053, 2055, 2750, 2820, 3220, 3230, 3400, 3410, 3500, 3600, 3750, 3820, 3821, 3900, 3920, 4500, 4850, 490A/B.
7. Physics 3810 or Applied Mathematics/Pure Mathematics 3202.
8. An additional 12 credit hours in physics courses numbered 3000 or higher which shall include at least 6 credit hours selected from physics courses numbered 4000 or higher.
9. Fifteen credit hours in applicable elective courses\*

Note: *Certain of the graduate courses may be taken in the final year of the Honours Program with the permission of the Head of the Department.*

\*Only 6 credit hours at the 1000 level in each of Physics, Chemistry and Mathematics can be used to fulfil the 120 credit hours required for the Honours program. The inclusion of Mathematics 1090, the sequence of Physics 1020, 1050 and 1051 or the substitution of Chemistry 1010, 1011 and 1031 for Chemistry 1050 and 1051 will each increase the number of credit hours required for the Honours Physics program by three.

An Honours thesis is to be presented on work undertaken by the candidate under the guidance of a Department of Physics and Physical Oceanography faculty member. The thesis comprises the 6 credit hour course Physics 490A/B. Students should seek departmental advice regarding a thesis project no later than the winter preceding the semester in which the project will be started.

The Honours Physics program in and beyond the third year requires a familiarity with computer programming and numerical analysis. In choosing electives for this program, the Department recommends that students supplement the prescribed program with the following courses Computer Science 2602 and 3731 (or Applied Mathematics 2130 and 3132). Mathematics 2051 and 3000 are also suitable electives. For specific courses and recommendations about electives, consultation with a faculty advisor in the Department is suggested.

The Department recommends that students wishing to complete the Honours Physics program in 120 credit hours follow the schedule given below. This schedule is intended for students who qualify for Physics 1050 and 1051. Other suggested course schedules are available from the Head of the Department.

**Recommended Course Schedule - Honours Physics Program**

Year	Semester I	Semester II
I	English 1080 Chemistry 1050 Mathematics 1000 Physics 1050 Elective	English 1110 (1101, 1102) Chemistry 1051 Mathematics 1001 Physics 1051 Elective
II	Mathematics 2000 Mathematics 2050 Physics 2053 Physics 2750 Elective	Applied Mathematics/Pure Mathematics 3202 Applied Mathematics/Pure Mathematics 3260 Physics 2055 Physics 2820 or Elective Elective
III	Physics 3220 Physics 3400 Physics 3500 Physics 3750 Physics 3820	Physics 3900 Physics 3600/4500 Physics 3230/3410 Physics Elective Elective
IV	Physics 3821 Physics 3920 Physics 4850 Physics 490A Physics Elective	Physics 4500/3600 Physics 3410/3230 Physics 490B Physics Elective Physics Elective

### 5.9.5 Major in Environmental Physics

1. English 1080 and English 1110 (or equivalent)
2. Chemistry 1050 and 1051 (or Chemistry 1010, 1011, and 1031)
3. Mathematics 1000 and 1001
4. Mathematics 2000, Mathematics 2050, Applied Mathematics/Pure Mathematics 3260, Applied Mathematics/Pure Mathematics 3202
5. Physics 1050 (or 1020) and 1051
6. Physics 2053, 2055, 2750, 2820, 3220, 3820, 3300, 3340, 4340
7. Physics 3400 or 3500
8. Earth Sciences 1000, 1002, 2502, 3170, 3172
9. Geography 2102, 2195, 3120
10. Biology 2120, 2600

The Major degree offers students a fair degree of latitude in choosing electives, students are encouraged to take electives from Geography and Earth Sciences: of particular merit would be any of Earth Sciences 3600, 3611 or 4105.

### 5.9.6 Honours in Environmental Physics

1. English 1080 and English 1110 (or equivalent)
2. Chemistry 1050 and 1051 (or Chemistry 1010, 1011, and 1031)
3. Mathematics 1000 and 1001
4. Mathematics 2000, Mathematics 2050, Applied Mathematics/Pure Mathematics 3260, Applied Mathematics/Pure Mathematics 3202
5. Physics 1050 (or 1020) and 1051
6. Physics 2053, 2055, 2750, 2820, 3220, 3820, 3821, 3300, 3340, 4205, 4300, 4340, 490A/B
7. Physics 3400 or 3500
8. Earth Sciences 1000, 1002, 2502, 3170 and 3172
9. Geography 2102, 2195, 3120
10. Biology 2120, 2600

An honours thesis is to be presented on work undertaken by the candidate under the guidance of a Department of Physics and Physical Oceanography faculty member. The thesis comprises the 6 credit hour course Physics 490A/B. Students should seek departmental advice regarding a thesis project no later than the winter preceding the semester in which the project will be started.

The Department recommends that students wishing to complete the Honours Environmental Physics program in 120 credit hours follow the schedule given below. This schedule is intended for students who qualify for Physics 1050 and 1051. Other suggested course schedules are available from the Head of the Department.



## Recommended Course Schedule - Honours Environmental Physics Program

Year	Semester I	Semester II
I	English 1080 Chemistry 1050 Physics 1050 Earth Sciences 1000 Mathematics 1000	English 1110 Chemistry 1051 Physics 1051 Earth Sciences 1002 Mathematics 1001
II	Physics 2053 Physics 2750 Geography 2102 Mathematics 2050 Mathematics 2000	Physics 2820 Geography 2195 Mathematics 3260 Mathematics 3202 Elective
III	Physics 3220 Physics 3820 Earth Sciences 2502 Physics 3400/3500 Physics 3340	Physics 2055 Biology 2120 Geography 3120 Earth Sciences 3170 Elective
IV	Physics 3300 Physics 3821 Biology 2600 Physics 490A Earth Sciences 3172	Physics 4300 Physics 4340 Physics 490B Physics 4205 Elective

## Table of Credit Restrictions for Present Environmental Physics Courses with Former Courses

Credit May Be Obtained For Only One Course From Each of The Pairs of Courses Listed in This Table

Present Course	Former Course	Present Course	Former Course
1020	1200	3230	2210
1021	1201	1051	2050
1051	1052	1051	1061
2820	2200	3750	3700
2053	2450	3750	3850
2055	2550	490A/B	4990
2750	2700	1051	2054
3220	3200	1051	2550

Physics 1021 and the former Physics 1201 will be considered equivalent for prerequisite purposes. Physics 1051 and 2820 will be considered equivalent to the former Physics 1054 and 2054 for prerequisite purposes. Physics 1051 and the former Physics 1052 and 2050 will be considered equivalent for prerequisite purposes.

Not all courses are offered every year. Students should check with the Department prior to registration to plan programs.

## 5.9.7 Course List

In accordance with Senate's *Policy Regarding Inactive Courses*, the course descriptions for courses which have not been offered in the previous three academic years and which are not scheduled to be offered in the current academic year have been removed from the following listing. For information about any of these inactive courses, please contact the Head of the Department.

**1020 Introductory Physics I (F) & (W)** is a non-calculus based introduction to mechanics.

Prerequisite: Level III Advanced Mathematics or Mathematics 1090. Mathematics 1090 may be taken concurrently. It is recommended that students have completed at least one of level II and level III high school physics courses, however this course may be completed by someone who has no physics background provided some extra effort is made.

Lectures: Three hours per week.

Laboratories: Normally six laboratory sessions per semester, with each session lasting a maximum of three hours.

Tutorials: Optional tutorials will be available, on average one hour per week.

**1021 Introductory Physics II (F) & (W)** is a non-calculus based introduction to fluids, wave motion, light, optics, electricity and magnetism.

Prerequisites: Physics 1020 or 1050 and Mathematics 1000. Mathematics 1000 may be taken concurrently.

Lectures: Three hours per week.

Laboratories: Normally six laboratory sessions per semester, with each session lasting a maximum of three hours.

Tutorials: Optional tutorials will be available, on average one hour per week.

Note: Credit can be obtained for only one of Physics 1021, 1051 and 1061.

**1050 General Physics I: Mechanics (F) & (W)** is a calculus based introduction to mechanics. The course will emphasize problem solving.

Prerequisite: Mathematics 1000, which may be taken concurrently.

Lectures: Three hours per week.

Laboratories: Normally six laboratory sessions per semester, with each session lasting a maximum of three hours.

Tutorials: Optional tutorials will be available, on average one hour per week.

Note: For more details regarding physics 1050, see Note 4 under **Programs in Physics**.

**1051 General Physics II: Oscillations, Waves, Electromagnetism (F) (W) & (S)** is a calculus based introduction to oscillations, wave motion, physical optics and electromagnetism.

Prerequisites: Physics 1050 or 1020 (with a minimum grade of 65%) and Mathematics 1001. Mathematics 1001 may be taken concurrently.

Laboratories: Normally six laboratory sessions per semester, with each session lasting a maximum of three hours.

Tutorials: Optional tutorials will be available, on average one hour per week.

Note: Credit can be obtained for only one of Physics 1021, 1051, and 1061.

**2053 General Physics III: Fluids and Thermal Physics (F)** examines elasticity, fluid mechanics, thermodynamics, kinetic theory and statistical mechanics.

Prerequisites: Mathematics 1001 and Physics 1051 which may be taken concurrently.

Lectures: Three hours per week.

Laboratory: Three hours per week.

**2055 General Physics V: Electricity and Magnetism (W)** examines Gauss' Law, the electrostatic potential, capacitance, magnetic forces and the magnetic field, electromagnetic induction, magnetic materials, ac circuits, superconductivity, the displacement current and Maxwell's equations.

Prerequisites: Mathematics 2000 and Physics 1051. Mathematics 2000 may be taken concurrently.

Lectures: Three hours per week.

Laboratory: Three hours per week.

**2151 Stellar Astronomy and Astrophysics (F) & (W)** covers atomic

structure and spectra. The sun: radiation, energetics, magnetic field. Stars: distance, velocity, size, atmospheres, interiors. Variable stars, multiple stars, clusters and stellar associations. Stellar evolution, interstellar matter, structure of the Milky Way Galaxy. Exterior galaxies, quasi-stellar objects, pulsars. Cosmology.  
Prerequisites: Six credit hours in Mathematics courses at the first year level.  
Lectures: Three hours per week.

**2750 General Physics VI: Modern Physics (F)** covers special relativity, quanta of light, atomic structure and spectral lines, quantum structure of atoms and molecules, nuclei and elementary particles.  
Prerequisites: Mathematics 1001 and Physics 1051 which may be taken concurrently.  
Lectures: Three hours per week.

Note: *Students may receive credit for only one of Physics 2750 and 2056.*

**2820 Computational Mechanics (W)** covers Newtonian dynamics and celestial mechanics, numerical differentiation and integration, numerical solutions to mechanics problems, data and spectral analysis, Fourier series and normal modes, oscillations and vibrations, linear and non-linear oscillators, nonlinear dynamics and chaos.  
Prerequisites: Physics 1051, Mathematics 2000 (Mathematics 2000 may be taken concurrently).  
Lectures and Laboratories: Up to five hours per week.

**3000 Physics of Device Materials (F)** Structures of crystalline and amorphous solids. Excitations and transport in metals, semiconductors, and dielectrics; electronic band structures. Physics of multi-material devices including photodiodes, solid state lasers, and field-effect transistors.  
Prerequisites: Physics 2055.

**3150 Astrophysics I (W)** is a review of macroscopic and microscopic physics. The sun: luminosity, mass, spectrum, photosphere, corona, interior. Principles of stellar structure; radiative and convective transport of energy. The virial theorem. Thermonuclear fusion; temperature dependence; the solar neutrino problem. Nucleosynthesis; the curve of binding energy; the synthesis of heavy elements. White dwarfs, neutron stars, and black holes; degenerate electron and neutron gases; Chandrasekhar's Limit. Population I and Population II stars; the Hertzsprung-Russell diagram; relationships among luminosity, mass, and effective temperature for main sequence stars. Evolution of post main sequence stars.  
Prerequisites: Physics 2053, 2750 (or 2056), and 2820.  
Lectures: Three hours per week.

**3151 Astrophysics II** covers stellar spectra and classification of stars. Hertzsprung-Russell diagram; equations of stellar structure for a star in equilibrium; temperature and density dependencies of nuclear processes. Formation and classification of binary stars; mass and energy transfer in binary star systems; semidetached binaries; cataclysmic variables, pulsars, etc. Galaxies and galactic structure; active galactic nuclei; cosmological redshift. Cosmology.  
Prerequisites: Physics 3150 and 3220.  
Lectures: Three hours per week.

**3220 Classical Mechanics I (F)** covers kinematics and dynamics of a particle. Moving reference systems. Celestial mechanics. Systems of particles.  
Prerequisites: Physics 2820 and Applied Mathematics/Pure Mathematics 3260. Applied Mathematics/Pure Mathematics 3260 may be taken concurrently.  
Lectures: Three hours per week.

**3230 Classical Mechanics II (W)** covers rigid body motion. Lagrange's equations. Hamilton's equations. Vibrations. Special theory of relativity.  
Prerequisites: Physics 3220 and 3810 (or Applied Mathematics/Pure Mathematics 3202) and Applied Mathematics/Pure Mathematics 3260.  
Lectures: Three hours per week.

**3300 Introduction to Physical Oceanography (F)** deals with the physics of processes in the ocean, but provides an integrated view of the whole field of oceanography. The importance of physical processes to other aspects of oceanography is treated.  
Prerequisites: Physics 2053 and Mathematics 2000.  
Lectures: Three hours per week.

**3340 Principles of Environmental Physics** will explore the basic physical principles of light, heat, energy and sound in the natural environment. Several key aspects of physics in the environment will be covered including climate and the physical evolution of the planet and the present role of the atmosphere and ocean spectroscopy in the atmosphere and measurement and observation of the atmosphere; principles of energy generation and pollution transport in the atmosphere and ocean.  
Lectures: Three hours per week.  
Prerequisites: Mathematics 2000 and Physics 2053.

**3400 Thermodynamics (F)** covers the first and second laws of thermodynamics. Entropy. Thermodynamics of real substances. Kinetic theory of matter. Introduction to statistical mechanics.  
Prerequisites: Mathematics 2000, Physics 2053 and Physics 2750 or 2056.  
Lectures: Three hours per week.

**3410 Statistical Mechanics (W)** covers ensembles. Classical and quantum statistical mechanics. Statistical mechanics of phase transitions. Advanced topics in statistical mechanics.  
Prerequisites: Physics 3400 and 3750. Physics 3750 may be taken concurrently.

Lectures: Three hours per week.

**3500 Electromagnetic Fields I (F)** examines electrostatic Field: field, potential, Poisson's equation, Laplace's equation, capacitance, dielectrics, polarization, electric displacement, boundary conditions. Magnetic Field: electric current and magnetic field, vector potential, Lorentz force and relativity, changing magnetic field, inductance, magnetic materials, magnetization. Maxwell's equations.  
Prerequisites: Physics 2055 and 3810 (or Applied Mathematics/Pure Mathematics 3202).  
Lectures: Three hours per week.

**3550 Electric Circuits (S)** covers circuit elements. Simple resistive circuits. Techniques of circuit analysis. Topology in circuit analysis. Operational amplifiers. Reactive circuit elements. Natural response and step response of RL, RC and RLC circuits. Circuits driven by sinusoidal sources. Mutual inductance. Series and parallel resonance. Laplace transforms in the analysis of frequency response.  
Prerequisites: Mathematics 2050, Physics 2055 and Applied Mathematics/Pure Mathematics 3260. Applied Mathematics/Pure Mathematics 3260 may be taken concurrently.  
Lectures and Laboratory: Not more than six hours per week.

**3551 Analogue Electronics (S)** is a review of network analysis. Feedback. Electron tubes. Semiconductor diodes. Introduction to transistors. Introduction to amplifiers. Small signal models. Small signal analysis of amplifiers. Operational amplifiers. Selected topics in circuit design such as biasing, voltage regulators and power circuits, noise.  
Prerequisites: Physics 3550 and Applied Mathematics/Pure Mathematics 3260.  
Lectures and Laboratory: Not more than six hours per week.  
This course is recommended for students with an interest in experimental Physics.

**3600 Optics and Photonics I (W)** covers geometrical Optics: thin lenses, mirrors, optical systems. Two-beam and multiple-beam interference phenomena. Fraunhofer Diffraction. Introduction to Maxwell's Theory: reflection, transmission, and polarization. Modulation of light waves. Fibre-optical light guides: intermodal dispersion, index profiles, loss mechanisms, single mode fibres. Optical communication systems: free space and fibre systems, emitters, detectors, amplifiers, wavelength-division multiplexing, integrated optics.  
Prerequisites: Mathematics 2000 and Physics 2055.  
Lectures: Three hours per week.

**3750 Quantum Physics I (F)** covers wave-particle duality of nature. Introduction to Quantum Mechanics. Schrödinger equation. One electron atoms. Quantum statistics.  
Prerequisites: Physics 2750 (or 2056), 3220 and 3810 (or Applied Mathematics/Pure Mathematics 3202). Physics 3220 and 3810 (or Applied Mathematics/Pure Mathematics 3202) may be taken concurrently.  
Lectures: Three hours per week.

**3751 Quantum Physics II (W)** covers multielectron atoms. Molecules. Solids - conductors and semiconductors. Superconductors. Magnetic properties. Nuclear models. Nuclear decay and nuclear reactions. Properties and interactions of elementary particles.  
Prerequisite: Physics 3750.  
Lectures: Three hours per week.

**3810 Mathematical Analysis (F)** - inactive course.

**3820 Mathematical Physics II (F)** examines the functions of a complex variable; residue calculus. Introduction to Cartesian tensor analysis. Matrix eigenvalues and eigenvectors. Diagonalization of tensors. Matrix formulation of quantum mechanics. Quantum mechanical spin. Vector differential operators in curvilinear coordinate systems. Partial differential equations of Mathematical Physics and boundary value problems; derivation of the classical equations, separation of variables; Helmholtz equation in spherical polar coordinates.  
Prerequisites: Applied Mathematics/Pure Mathematics 3260, and Physics 3810 (or Applied Mathematics/Pure Mathematics 3202).  
Lectures: Three hours per week.

**3821 Mathematical Physics III (F)** covers further topics on partial differential equations of Mathematical Physics and boundary value problems; Sturm-Liouville theory, Fourier series, generalized Fourier series, introduction to the theory of distributions, Dirac delta function, Green's functions, Bessel functions, ' functions, Legendre functions, spherical harmonics.  
Prerequisite: Physics 3820.  
Lectures: Three hours per week.

**3900 Physics Laboratory I (W)** is a selection of experiments based primarily on material covered in the third year courses.  
Prerequisites: At least two of Physics 2053, 2820, 2055, and Physics 2750 (or 2056).  
Laboratory: Six hours per week.

**3920 Physics Laboratory II (F)** is a selection of experiments based primarily on Modern Physics at the intermediate level.  
Prerequisite: Physics 3900.  
Laboratory: Six hours per week.  
Note: *Prerequisite requirements for Physics courses numbered 4000 and higher may be waived by the instructor.*

**4000 Solid State Physics** covers crystal structure and binding, phonons and lattice vibrations, thermal properties of solids. Electrons in solids, energy bands, semi-conductors, superconductivity, dielectric properties. Magnetic properties of solids.

Prerequisites: Physics 3400 and 3750.

Lectures: Three hours per week.

**4200 Classical Mechanics III** is a review of Lagrange's equations. Hamilton's canonical equations. Variational principles. Nöther's theorem for particles. Special relativity of particles and the electromagnetic field. Special topics at an advanced level.

Prerequisites: Physics 3230 and 3820.

Lectures: Three hours per week.

**4205 Introduction to Fluid Dynamics** (same as Applied Mathematics 4180) covers basic observations, mass conservation, vorticity, stress, hydrostatics, rate of strain, momentum conservation (Navier-Stokes equation), simple viscous and inviscid flows, Reynolds number, boundary layers, Bernoulli's and Kelvin's theorems, potential flows, water waves, thermodynamics.

Prerequisites: Physics 3220 and either Applied Mathematics 4160 or Physics 3821.

Lectures: Three hours per week.

**4210 Continuum Mechanics** - inactive course.

**4300 Advanced Physical Oceanography (W)** covers fundamental properties of seawater and techniques of oceanographic measurement. The dynamical equations of oceanography are derived and solutions explored by comparison with oceanic observations. Properties of waves in rotating and non-rotating fluids. Linear and non-linear wave theory are developed.

Prerequisites: Physics 3300 and 3820 or Engineering 7033 or the permission of the instructor.

**4330 Topics in Physical Oceanography** - inactive course.

**4340 Modelling in Environmental Physics** covers the basic principles underlying environmental modelling will be developed and techniques for modelling presented and applied. Techniques for numerical modelling will be developed and simple numerical models will be developed for use in terrestrial, atmospheric and oceanic environments. Free and forced systems will be discussed and the transition to chaos and some aspects of chaotic dynamics.

Lectures: Three hours per week.

Prerequisites: Physics 3340 and Physics 3820 (or the permission of the instructor).

**4500 Electromagnetic Fields II** covers multipole expansions, electrostatic fields as boundary value problems, polarizability of molecules in dielectric media, Clausius-Mossotti relation, gauges. Electromagnetic Waves: Poynting's theorem, reflection and transmission of electromagnetic waves, cavity resonators, wave guides. Electromagnetic Radiation: dipoles, antennas, quantum mechanics and electro-magnetic interactions. Selected topics in electrodynamics and applied electromagnetism.

Prerequisites: Physics 3500 and 3820.

Lectures: Three hours per week.

**4600 Optics and Photonics II** is a review of basic topics in wave optics. Phase sensitive imaging. Electromagnetic waves in anisotropic media. Scattering of electromagnetic waves. The physics of light sources and applications. Non-linear optics and applications.

Prerequisites: Physics 3500, 3600, and Physics 3751 (Physics 3751 may be taken concurrently).

Lectures: Three hours per week.

**4700 Atomic and Molecular Physics** - inactive course.

**4710 Nuclear Physics** - inactive course.

**4820 Mathematical Physics IV** - inactive course.

**4850 Quantum Mechanics (F)** examines postulates of quantum mechanics. Operators and operator algebra. Matrix representations. Spin and magnetic fields. Approximation methods: WKB method, time independent perturbation theory, time dependent perturbation theory, variational methods. Elementary scattering theory.

Prerequisites: Physics 3230, 3750, 3820.

Lectures: Three hours per week.

**4851 Advanced Quantum Mechanics (W)** covers general formulation of quantum mechanics, measurement theory and operators. Hilbert spaces. Advanced topics selected from: electron in a strong magnetic field and the Aharonov-Bohm effect; advanced scattering theory; systems of identical particles; Feynman path integral formulation of quantum mechanics; relativistic quantum mechanics; second quantization; symmetry and group theory; density matrix and mixtures.

Prerequisite: Physics 4850 and 3821.

Lectures: Three hours per week.

**4900 Senior Laboratory** - inactive course.

**490A/B Honours Physics Thesis**

**6317 Underwater Acoustics** covers basic theory of sound, sound in the ocean environment, wave equation, ray tracing, sonar system operation, transducers, applications.

Prerequisites: Physics 3810 (or Applied Mathematics/Pure Mathematics 3220) and 3220, or the permission of the instructor.

Lectures: Three hours per week.

**6318 Ocean Climate Modelling** covers numerical techniques, finite difference, finite element and spectral methods. Introduction to the climate system. Ocean climate models. Box models. Variability on interdecadal, centennial and geological scales. Zonally averaged models. 3-D ocean modelling. Thermohaline circulation. General circulation models. Climate modelling and global warming.

Prerequisites: Physics 3810 (or Applied Mathematics/Pure Mathematics 3202), Physics 3300 and the completion of any 15 credit hours in core courses at the 3000 or 4000 level in the Faculty of Science, or the permission of the instructor.

Lectures: Three hours per week.

## 5.10 Psychology

### 5.10.1 Programs in Psychology

The following undergraduate programs are available in the Department.

1. Major and Honours in Psychology (B.A. or B.Sc.)
2. Major and Honours in Behavioural Neuroscience (B.Sc. only)
3. Minor in Psychology (B.A. or B.Sc.)
4. Joint Honours in Psychology and Biology (B.Sc. Hons. only)
5. Joint Honours in Psychology (Behavioural Neuroscience) and Biology (B.Sc. Hons. only)
6. Joint Honours in Psychology (Behavioural Neuroscience) and Biochemistry (B.Sc. Hons. only)
7. Joint Honours in Psychology (Behavioural Neuroscience) and Biochemistry (Nutrition) (B.Sc. Hons. only)

Details of the joint honours programs are given under the Degree Regulations of the Faculty of Science.

### 5.10.2 Admission to Major and Minor Programs

Admission to the Major and Minor programs in the Department of Psychology is competitive and selective. Students who wish to enter these programs must submit a completed application form to the Psychology Department by June 1 for Fall semester registration and by October 1 for Winter semester. To be eligible for admission, students must have completed the 24 credit hours as listed below with an average of at least 65% in Psychology 1000/1001 and an overall average of at least 60% in Psychology, English, and Mathematics:

1. Psychology 1000, 1001
2. English 1080 and one of 1101, 1102, 1103, or 1110, or equivalents.
3. Mathematics 1000, or two of 1090, 1050, 1051 (or equivalents).
4. Six credit hours of electives (9 if only Mathematics 1000 is completed).

Students who fulfil the eligibility requirements compete for a limited number of available spaces. Selection is based on academic performance, normally cumulative average and performance in recent courses.

### 5.10.3 Admission to Honours Programs

The Honours programs in the Department of Psychology are designed for students who would like to concentrate their studies or pursue graduate work. Students who wish to be admitted to these programs must submit an "Application for Admission to Honours Program Faculties of Arts or Science" to the Psychology Department by June 1 for Fall semester registration and by October 1 for Winter semester. To be eligible for admission, students must have completed Psychology 2910, 2911, 2520, and 2570 and obtained in these courses a grade of "B" or better, or an average of 75% or higher. Students who fulfill the eligibility requirements compete for a limited number of available spaces. Selection is based on academic performance in the required courses. In special circumstances, students may be admitted to Honours Programs at times other than June and October.

Note: *Students are advised to consult the general regulations for Honours in the Faculty of Arts or the Faculty of Science, as appropriate.*

### 5.10.4 Requirements for a Major in Psychology

- Students may Major in Psychology as part of either a B.A. or a B.Sc. program. All Majors are required to complete a minimum of 42 credit hours of Psychology as listed below:
  - Psychology 1000, 1001, 2520, 2570, 2910, 2911
  - Twelve credit hours in Psychology chosen from the following: 3050, 3100, 3250, 3350, 3450, 3620, 3650, 3750, 3800 or 3801.
  - Twelve credit hours of 4000-level courses in Psychology, of which at least one must be a research experience course and one must be a selected topics course.
- Psychology Majors following the B.Sc. program are also required to complete the following:
  - Mathematics 1000 (or equivalent).
  - Biology 1001 and 1002
  - Either Chemistry 1010 and 1011 (or 1050 and 1051); OR Physics 1020 (or 1050) and 1021 (or 1051)
  - Six credit hours of laboratory courses at the 2000 level or above in one of Biology, Chemistry, or Physics.  
 Note: *Biology/Psychology 3750 and Biology/Psychology 4701 cannot be used to satisfy the requirement of 6 laboratory credit hours at the 2000 level or above in either Biology, Chemistry, or Physics.*
- Psychology Majors following the B.A. program are also required to complete Mathematics 1000 or two of 1090, 1050, 1051 (or equivalents), and are encouraged to complete at least 6 credit hours in Biology.

### 5.10.5 Requirements for Honours in Psychology

- Honours students in Psychology are required to complete the 60 credit hours of Psychology as listed below:
  - Psychology 1000, 1001, 2520, 2570, 2910, 2911, 3900, 4910, 499A/B
  - Eighteen credit hours chosen from the alternatives listed in Clause 1. b. of the requirements for a Major in Psychology
  - Twelve credit hours of 4000-level courses in Psychology, of which at least one must be a research experience course and one must be a selected topics course.
- Honours students must also complete the requirements listed in either Clause 2. or Clause 3., as applicable, of the requirements for a Major in Psychology.
- Honours students will be required to submit in their graduating year, an undergraduate thesis (Psychology 499A/B) which demonstrates their competence in Experimental Psychology.

### 5.10.6 Requirements for a Major in Behavioural Neuroscience (B.Sc. Only)

A program is offered in the Psychology Department to provide an education in Behavioural Neuroscience. Students wishing to enroll in the program are advised to consult with the Head of the Department at the earliest opportunity. Students who intend to pursue graduate studies should take courses leading to the Honours degree.

The program for a Major in Behavioural Neuroscience shall include:

- Psychology 1000, 1001, 2520, 2570, 2910, 2911, 3250, 3800, 3801, 4870
  - One of Psychology 4810, 4850 or 4851
  - One of the following courses: Psychology 3050, 3100, 3350, 3450, 3620, 3650, 3750.
- Mathematics 1000 (or equivalent) and 1001
  - Chemistry 1010 and 1011 (or 1050 and 1051), and 2440 (or 2400/2401)
  - Physics 1020 (or 1050) and 1021 (or 1051).
  - Biology 1001, 1002
  - English 1080 and one of 1101, 1102, 1103, or 1110, or equivalents
- Eighteen credit hours from the following courses chosen from at least three different sciences:
  - Biochemistry: Any 2000-, 3000-, or 4000-level course except 2000, 2010, 2011, 3402, 4302, or 4400.
  - Biology: 2060, 2210, 2250, 2900, 3050, 3160, 3202, 3401, 3500, 3530, 3540, 4200, 4241, 4245, 4402
  - Chemistry: 2210, 2300 or any 3000 or 4000 level course
  - Computer Science: Any 2000, 3000, or 4000 level course except service courses
  - Mathematics: 2000, 2001, 2050, 2051 or any 3000 or 4000 level pure or applied mathematics course
  - Physics: Any 2000, 3000, or 4000 level course except 2000, 2050, 2151, 3150, 3151

Note: *The courses listed under Clause 3 may have prerequisites. It is the student's responsibility to ensure that all prerequisites have been met, or that waivers have been obtained, before registering for these courses.*

### 5.10.7 Requirements for Honours in Behavioural Neuroscience (B.Sc. Only)

- Honours students in Behavioural Neuroscience are required to complete the following Psychology courses: 1000, 1001, 2520, 2570, 2910, 2911, 3250, 3800, 3801, 3900, 4870, 499A/B, one of 4810, 4850 or 4851; one further course in Psychology chosen from the following: 3050, 3100, 3350, 3450, 3620, 3650, 3750.
- Honours students in Behavioural Neuroscience must also complete the requirements listed in Clauses 2. and 3. of the requirements for a Major in Behavioural Neuroscience.

3. In accordance with Clause 6. a. of the Regulations for the Honours Degree of Bachelor of Science, Honours candidates must obtain a grade of "B" or better, OR an average of 75% or higher in all the required courses listed in Clauses 1. and 3. of the requirements for a major in Behavioural Neuroscience and Clause 1 of the requirements for honours in Behavioural Neuroscience, except those at the 1000 level.

### 5.10.8 Requirements for a Minor in Psychology

Students who Minor in Psychology are required to complete a minimum of 24 credit hours of Psychology as follows:

- a. Psychology 1000, 1001, 2520, 2570
- b. Twelve other credit hours of Psychology.

### 5.10.9 Course Descriptions

In accordance with Senate's *Policy Regarding Inactive Courses*, the course descriptions for courses which have not been offered in the previous three academic years and which are not scheduled to be offered in the current academic year have been removed from the following listing. For information about any of these inactive courses, please contact the Head of the Department.

#### 5.10.9.1 Non-Restricted Courses

Note: *These courses are open to all students who have the appropriate prerequisites. Psychology 1000 and 1001 are prerequisites for all Psychology courses. Students who intend to major in Psychology should note that each course marked with an asterisk is credit-restricted with a Majors laboratory course; consequently, taking these courses will reduce your options in the Majors program.*

**1000 and 1001 Introduction to Psychology** is an introduction to Psychology as a biological and social science. Topics shall include research methodology, physiological processes, perception, learning, memory and cognition, human development, animal behaviour, emotion, motivation, consciousness, personality and individuality, psychological disorders and treatment, and social psychology.  
Psychology 1000 is a prerequisite for Psychology 1001.

**2010 The Psychology of Human Development I** is a survey of principles underlying human development from the prenatal stage to adolescence. Topics covered will include sensorimotor, linguistic, perceptual, cognitive and motivational changes.

Prerequisites: Psychology 1000 and 1001.

Note: *Credit may not be obtained for both Psychology 2010 and either of the following: Psychology 3050, Psychology 2025.*

**2011 The Psychology of Human Development II** is an examination of relevant research on socialization and personality development with special emphasis on attachment, imitation, sex role and moral development in childhood and adolescence.

Prerequisites: Psychology 1000 and 1001.

Note: *Credit may not be obtained for both Psychology 2011 and Psychology 2025.*

**2012 The Psychology of Human Development III** is concerned with the major physical, intellectual and interpersonal changes associated with maturity and aging. It completes the study of the life-span development of the human organism initiated in Psychology 2010 and 2011.

Prerequisites: Psychology 1000 and 1001.

Note: *Credit may not be obtained for both Psychology 2012 and Psychology 3052.*

**2100 Attitudes and Social Cognition** is an examination of the concepts and principles involved in the interaction between the individual and others. Emphasis will be on the theoretical and empirical concerns of attitude formation and change, social perception, and social cognition.

Prerequisites: Psychology 1000 and 1001.

Note: *Credit may not be obtained for both Psychology 2100 and either of the following: Psychology 3100, Psychology 2125.*

**2120 Interpersonal and Group Processes** - inactive course.

**2150 Introduction to Forensic Psychology** will provide an in-depth overview of the relationship between psychology and the law. A variety of topics will be discussed and critically evaluated, including the use and misuse of psychology-based investigative methods such as offender and geographic profiling, detection of deception, investigative interviewing, eyewitness testimony, jury decision-making, corrections and treatment, risk assessment, and criminal responsibility.

Prerequisites: Psychology 1000 and 1001.

**2240 Survey of Learning** - inactive course.

**2440 Human Memory and Cognition** is an introduction to the basic principles of human memory and information processing. Topics covered will include the organization, representation and retrieval of information in memory, attention, pattern recognition, language processing, mental imagery, reasoning, problem solving, and decision making. There will be an emphasis on the application of basic principles to real life situations.

Prerequisites: Psychology 1000 and 1001.

Note: *Credit may not be obtained for both Psychology 2440 and either of the following: Psychology 3450, Psychology 2425.*

**2530 Mathematical Psychology** - inactive course.

**2540 Psychology of Gender and Sex Roles** is an examination of the influence of gender and sex roles on development and socialization, attitude formation, cognition, personality and mental health.

**2560 Intelligence** - inactive course.

**2610 Personality** (formerly 2200) is a review of the research and theory pertaining to a psychological understanding of human personality.

Prerequisites: Psychology 1000 and 1001.

Note: *Credit may not be obtained for both Psychology 2610 and any of the following: Psychology 2620, Psychology 2625, the former Psychology 2200.*

**2800 Drugs and Behaviour** is an examination of the neurophysiology of drug action, the measurable effect of drugs on experimentally controlled behaviour, and a survey of information available on common self-administered drugs and their immediate and long-term effects.

Prerequisites: Psychology 1000 and 1001.

**2810 Brain and Behaviour** (formerly 2500) is a broad survey of physiological psychology at an elementary level. Topics will include the following: structure of the nervous system, nerve conduction, sensory and motor systems, behavioural biology of reproduction, aggression, feeding and drinking, sleep and arousal, pleasure and pain, learning and memory.

Prerequisites: Psychology 1000 and 1001.

Note: *Credit may not be obtained for both Psychology 2810 and any of the following: Psychology 2850, Psychology 2825, the former Psychology 2500.*

**3430 The Psychology of Thinking** (formerly 2430) will present theories and experimental studies of problem solving, creativity and decision making. Topics covered will include the difficulties encountered in problem solving and solutions such as strategies for organizing and representing information, the production of ideas, transfer and discovery learning.

Prerequisites: Psychology 1000 and 1001.

Note: *Credit may not be obtained for Psychology 3430 and the former Psychology 2430.*

**3501 Industrial Psychology** is an examination of the theories and concepts of industrial psychology. Topics covered will include research and testing methods, measuring job and performance appraisal systems, personnel selection methods, personnel training and development, work motivation, work stress, designing work for people, and human engineering.

Prerequisite: Any 2000-level course in Psychology.

**3533 Sexual Behaviour** (formerly 3300) is a psychological analysis of sexual behaviour. The course will examine the physiological, behavioural, social and personality bases of the male and female sexual response, heterosexuality and homosexuality and other sexual behaviour. Other topics may include the social precursors of human sexual behaviour, sex therapy, pregnancy and childbirth, and nonhuman sexual behaviour.

Prerequisites: Psychology 1000 and 1001.

Note: *Credit may not be obtained for Psychology 3533 and the former Psychology 3300.*

**3577 Program Evaluation** - inactive course.

**3640 The Psychology of Abnormal Behaviour** (formerly 3600) covers problems of definition, the history of beliefs about abnormal behaviour and the implication of a behavioural model for the understanding and control of behaviour problems will be discussed.

Prerequisite: Any 2000 level course in Psychology.

Note: *Credit may not be obtained for both Psychology 3640 and any of the following: Psychology 3650, Psychology 3626, and the former Psychology 3600.*

**4810 Human Neuropsychology** covers clinical disorders of sensation, perception, movement, memory, language and emotion that have resulted from brain damage or disease will be explained on the basis of current knowledge of brain structure and function. Lateralization of function, disconnection syndromes, and mechanisms of recovery of function following brain damage will also be covered. Related experimental studies of brain structure and function in non-humans will be discussed.

Prerequisite: One of Psychology 2810, 2850 or 3800.

#### 5.10.9.2 Majors Courses

Note: *These courses are restricted to Majors and Minors in Psychology and Behavioural Neuroscience.*

**2520 Mind and Brain** covers cognitive and neuroscience perspectives on two different themes (visual perception from sensation through imagery,

attention and working memory) will be used to convey the logic and methods used in modern-day psychological research, the development and use of theory to guide further research, the utility of multiple research perspectives for developing a full understanding of psychological issues, and basic concepts in cognition and neuroscience.  
Prerequisites: Psychology 1000 and 1001.

**2570 Understanding Individual Differences** uses current conceptualizations of personality and ability as a focus, the course will review issues related to the measurement of individual differences, including test characteristics and ethics. Research from a variety of perspectives will be used to illustrate the contributions of different areas of psychology to our understanding of individual differences.  
Prerequisites: Psychology 1000, 1001.

**2910 Research Methods in Psychology I** is an introduction to the design and application of psychological research with particular concentration on understanding and applying scientific method, creating and testing hypotheses, constructing reliable and valid experiments, managing and analyzing data sets, using statistical software, and scientific writing. Specific topics include descriptive statistics including measures of central tendency, variability and relative standing, inferential statistics such as *t* tests for one and two sample designs, correlation and regression, and non-parametric statistics.  
Prerequisites: Psychology 1000 and 1001; Mathematics 1000 or two of 1090, 1050 and 1051 (or equivalents)  
Laboratory period weekly.  
Note: *Credit may not be obtained for both Psychology 2910 and any of the following: Statistics 2500, 2510, 2550, Psychology 2900, 2925.*

**2911 Research Methods in Psychology II** covers research methods in psychology with a focus on more complex research designs and statistical approaches, within the realm of experimentation and beyond the laboratory. Specific topics include controlling participant variables, using between and repeated measures designs within the context of Analysis of Variance (ANOVA). Particular ANOVA approaches include one-way and factorial designs, within subject design, and two-way mixed designs.  
Prerequisite: Psychology 2910  
Laboratory period weekly.  
Note: *Credit may not be obtained for both Psychology 2911 and any of the following: Statistics 2501, 2560, Psychology 2901, 2950.*

**3050 Developmental Psychology** is an examination of the methods of study and an evaluation of current findings and theoretical issues of importance to an understanding of development. Topics will be drawn from perception, learning, cognition, social learning, memory and language development.  
Prerequisite: Psychology 2520, 2570 and 2911.  
Note: *Credit may not be obtained for both Psychology 3050 and Psychology 2010.*

**3100 Social Psychology** is an examination of the concepts and principles involved in social behaviour. Topics covered will include attitudes, social cognition, interpersonal relations, and group processes.  
Prerequisite: Psychology 2520, 2570, and 2911.

**3250 Learning** (formerly 2250) examines how organisms adjust their behaviour to regularities in the environment as a result of experience.  
Prerequisites: Psychology 2520, 2570, and 2911.  
Note: *Credit may not be obtained for both Psychology 3250 and Psychology 2225 or the former Psychology 2250.*

**3350 Perception** (formerly 2360) is a broad survey of theory and research in sensation and perception.  
Prerequisites: Psychology 2520, 2570 and 2911.  
Note: *Credit may not be obtained for both Psychology 3350 and the former Psychology 2360.*

**3450 Human Cognition** is an introduction to the experimental study of the mental representations and processes involved in human cognition. Topics such as attention, perception and pattern recognition, concepts and the organization of knowledge, language processes, mental imagery, reasoning, problem solving, decision making and skilled performance will be covered with an emphasis on experimental analysis and techniques.  
Prerequisite: Psychology 2520, 2570 and 2911.  
Note: *Credit may not be obtained for both Psychology 3450 and either of the following: Psychology 2440, Psychology 2425.*

**3620 Personality Theory and Research** is a survey of personality theory and research.  
Prerequisites: Psychology 2520, 2570 and 2911.  
Note: *Credit may not be obtained for both Psychology 3620 and any of the following: Psychology 2610, Psychology 2625, and the former Psychology 2620.*

**3650 Abnormal Psychology** is an examination of the nature, explanation and treatment of psychological disorders with an emphasis on research methods and current findings.  
Prerequisites: Psychology 2520, 2570 and 2911.  
Note: *Credit may not be obtained for both Psychology 3650 and either of the following: Psychology 3640, Psychology 3626.*

**3750 Animal Behaviour I** is an introduction to the mechanisms, development, function and evolution of behaviour in animals. Topics include the history of ethology and comparative psychology, and behavioural ecology; methods of animal behaviour study, behaviour of animals in relation

to physiology, learning, communication, mating systems, and other areas in Biology and Psychology.

Prerequisites: Biology 1001, 1002 and Psychology 2520, 2570 and 2911.

Note: *Credit may be obtained for only one of Psychology 3750 and Biology 3750.*

**3800 Neuroscience** addresses the structure and function of neurons and neural circuits and examines principles of electrochemical neural communication at the macroscopic, microscopic and molecular level. The relevance of this knowledge to understanding brain mechanisms of normal and diseased brain functions will be touched upon. The molecular basis of the formation of some types of memories will be explored.  
Prerequisite: Psychology 2520, 2570 and 2911.

**3801 Behavioural Neuroscience** is a survey of knowledge about brain mechanisms of behaviour. Topics will include the following: basic neuroanatomy and neurophysiology, somatosensory systems and pain, reward, mental illness, sleep and arousal, developmental neurobiology, sexual development and behaviour, regulation of eating and body weight, learning and memory, and cortical function, including cortical mediation of language.  
Prerequisite: Psychology 2520, 2570 and 2911.  
Note: *Credit may not be obtained for both Psychology 3801 and any of the following: Psychology 2810, Psychology 2825, the former Psychology 2850.*

**3900 Design and Analysis III** is a course on complex and specialized research design in Psychology. Multifactor research designs that employ both between- and within-subjects independent variables. Advantages and disadvantages of using multifactor research designs to test psychological hypotheses. Hierarchical designs and incomplete factorials. The use of covariates and blocking to increase experimental precision. Problems created by missing data. Single subject designs. How to answer specific psychological questions in the context of complex designs. The design and analysis of non-experimental psychological research. Applications of such techniques as the analysis of variance and multiple linear regression to the data obtained with these research designs, with special attention to problems inherent in psychological research.  
Prerequisite: Psychology 2911.  
Laboratory period weekly.  
Note: *Credit may not be obtained for both Psychology 3900 and any of the following: Psychology 3950, Statistics 3520.*

**4050 Selected Topics in Developmental Psychology I**  
Prerequisite: Psychology 3050 or 3051.

**4051 Selected Topics in Developmental Psychology II**  
Prerequisite: Psychology 3050 or 3051.

**4070 Research Experience in Development Psychology** allows students to gain research experience in selected areas of developmental psychology.  
Prerequisites: Psychology 2520, 2570, 2911, and 3050.

**4150 Selected Topics in Social Psychology I**  
Prerequisite: Psychology 3100 or the former Psychology 3160.

**4151 Selected Topics in Social Psychology II**  
Prerequisite: Psychology 3100 or the former Psychology 3160.

**4152 Selected Topics in Applied Social Psychology**  
Prerequisite: Psychology 3100 or the former Psychology 3160.

**4160 Psychology and the Law** allows students, upon completion of this course, to demonstrate an advanced understanding of psychology and the law. Specifically, students will be able to discuss and critically evaluate topics related to the Canadian legal system, police investigations, memory in legal contexts, jury selection, jury decision-making, sentencing, parole, offender assessment and treatment, fitness to stand trial, and forensic civil psychology.  
Prerequisite: Psychology 3100 or the former Psychology 3160.

**4170 Research Experience in Social Psychology** will provide research experience in a selection of areas typically studied by social psychologists such as attitudes, prejudice, groups and social cognition. Students will acquire experience with research methods that are used to advance the body of knowledge in social psychology.  
Prerequisites: Psychology 2520, 2570, 2911, and 3100.

**4250 Selected Topics in Learning and Motivation I**  
Prerequisite: Psychology 3250 or the former Psychology 2250.

**4251 Selected Topics in Learning and Motivation II**  
Prerequisite: Psychology 3250 or the former Psychology 2250.

**4260 Learning Processes and Drug Effects** focuses on explanations of the behavioural effects of drugs that can be found in learning and conditioning theory. This course will provide a careful examination of such processes as drug state conditioning and discrimination, drug effects on operant behaviour, drug self-administration and tolerance.  
Prerequisite: Psychology 3250 or the former Psychology 2250.

**4270 Research Experience in Learning** allows students to gain research experience in selected areas of learning.  
Prerequisites: Psychology 2520, 2570, 2911, and 3250.

**4350 Selected Topics in Perception I** is an intensive examination of a specific topic of current interest in perception.

Prerequisites: Psychology 3350 or the former Psychology 2360.

**4351 Selected Topics in Perception II** is an intensive examination of a specific topic of current interest in perception.

Prerequisites: Psychology 3350 or the former Psychology 2360.

**4370 Research Experience in Perception** allows students to gain research experience in selected areas of perception.

Prerequisites: Psychology 2520, 2570, 2911 and 3350.

**4400 Selected Topics in Cognition I**

Prerequisite: Psychology 3450.

**4401 Selected Topics in Cognition II**

Prerequisite: Psychology 3450.

**4452 Selected Topics in Cognition: Reading** is a survey of the research literature on the development of reading skills including a discussion of dyslexia.

Prerequisites: Psychology 3450 and a course in Linguistics.

**4461 Psycholinguistics** (formerly 3400) is the psychological approach to the study of language concentrating particularly on the areas of speech, meaning, grammar and communication. The research topics to be discussed include the child's acquisition of language, bilingualism, teaching language to animals, and social factors in language use.

Prerequisites: Psychology 3050 or 3450.

**4470 Research Experience in Cognition** allows students to gain research experience in selected areas of cognition.

Prerequisites: Psychology 2520, 2570, 2911, and 3450.

**4610 Selected Topics in Personality I**

Prerequisite: Psychology 3620 or the former Psychology 2620.

**4620 Selected Topics in Personality II**

Prerequisite: Psychology 3620 or the former Psychology 2620.

**4650 Selected Topics in Abnormal Behaviour I**

Prerequisite: Psychology 3650.

**4651 Selected Topics in Abnormal Behaviour II**

Prerequisite: Psychology 3650.

**4660 Developmental Psychopathology** is a review of current theory and research related to the developmental course of maladaptive behaviours in children and adolescents. Topics will include behavioural, emotional and developmental disorders. Research concerning the role of individual, family, community and cultural factors will be discussed.

Prerequisite: Psychology 3650.

**4661 Family Psychology** is a study of the reciprocal relationship between family processes and abnormal behaviour. The course will focus on the role of family dynamics in the etiology of abnormal behaviour, the impact of psychological disorders on family functioning and the application of family therapy to create therapeutic change.

Prerequisite: Psychology 3650, or 2911 and 3640.

**4662 Clinical Psychology and Theories of Psychotherapy** will introduce students to the science and profession of clinical and counselling psychology. Course content will include a review of approaches to assessment and psychotherapy and a look at some of the major research questions and findings in this area.

Prerequisite: Psychology 3650.

**4670 Research Experience in Abnormal Psychology** allows students to gain research experience in selected areas of clinical psychology.

Prerequisites: Psychology 2520, 2570, 2911 and 3650.

**4671 Research Experience in Personality** allows students to gain experience in selected areas of personality research.

Prerequisites: Psychology 2520, 2570, 2911 and 3620.

**4701 Animal Behaviour II** - inactive course.

**4750 Selected Topics in Animal Behaviour I** will examine in detail a

specific topic of current interest in animal behaviour.

Prerequisite: Psychology 3750; or Biology 3750.

**4751 Selected Topics in Animal Behaviour II**

Prerequisite: Psychology 3750; or Biology 3750.

**4770 Research Experience in Animal Behaviour** allows students to gain research experience in selected areas of animal behaviour.

Prerequisite: Psychology 2520, 2570, 2911 and 3750.

**4850 Selected Topics in Behavioural Neuroscience I**

Prerequisite: Psychology 2810, 3800 or 3801.

**4851 Selected Topics in Behavioural Neuroscience II**

Prerequisite: Psychology 2810, 3800, or 3801.

**4870 Neuroscience Research** allows students to gain research experience in selected areas of neuroscience.

Prerequisites: Psychology 2520, 2570, 2911 and 3800.

**4910 Systems in Contemporary Psychology** is a study of paradigms and explanations in contemporary psychology in the context of their historical antecedents.

Prerequisite: Thirty credit hours in Psychology courses required in the majors program.

**499A and 499B Honours Dissertation** is a 6 credit hours linked course, based on independent study of an approved problem in Psychology. The topic will be chosen in consultation with the Faculty Advisor. The first semester will normally involve directed reading in this area, and preparation of a dissertation proposal. The second semester will be devoted to conducting the study, gathering data, data analysis and preparation of a formal written report. The dissertation must be submitted for grading before the end of the tenth week of the semester in which the student is registered for 499B.

Prerequisite: Admission to the Honours Program.

## 5.11 Science

**1000 Introduction to Science I** is a liberal science course for Arts students, which reflects the way scientists think and work through historical, philosophical and social considerations of the environment we live in. Typical course content includes: the concepts of matter, motion and energy; the chemical basis for life and the interdependence of organisms; and the abundance and distribution of the Earth's natural resources.

Three lectures a week.

No laboratory.

**1001 Introduction to Science II** is continuation of the Science 1000.

Prerequisite: Science 1000.

Note: *Science 1000/1001 may not be used to fulfill any of the Science course requirements for the Honours and General Degrees in Science.*

**1150 and 1151 Introduction to Physical and Life Sciences** (formerly Science 115A/B) (1150 (F) and 1151 (W)) is an introduction to some concepts in the Physical and Life Sciences. These courses are primarily intended for the non-science major (B.A.; B.Ed. (Primary/ Elementary)).

Note: *Science 1150 and 1151 are not acceptable as prerequisites for 2000 level courses in Physics, Chemistry, Biology, Geography or Earth Sciences. Credit may not be obtained for both Science 115A and Science 1150 or for Science 115B and Science 1151.*

**5998 Exchange Programs in Science** will be available only to students attending Memorial University of Newfoundland as part of a formal exchange agreement, memorandum of understanding, or other special arrangement. Admission is by permission of the Dean of Science. Credit hours: 3 - 15, to be determined for each offering by the Dean in consultation with the appropriate Head of Department or Coordinator. This course may be repeated for credit once. This course will normally be offered twice a year, from March to August and September to February.

Archived Previous Calendar  
Current University Calendar available at  
[mun.ca/university-calendar](http://mun.ca/university-calendar)



Archive of previous Calendar  
Current University Calendar available at  
[mun.ca/university-calendar](http://mun.ca/university-calendar)

FACULTY OF EDUCATION

# FACULTY OF EDUCATION

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Elliot, R., B.A.(Hons.), M.Ed. *Memorial*, Ph.D. *Toronto*

## 1 Faculty of Education Degree Regulations

### 1.1 Mission Statement for the Faculty of Education

The Faculty of Education of Memorial University of Newfoundland, under the terms of THE MEMORIAL UNIVERSITY ACT, accepts as its primary responsibility the professional preparation of those who will give leadership in education. The responsibility includes the professional preparation of teachers, administrators and specialists who will work in elementary, and intermediate, and secondary schools and post-secondary institutions. The work of the Faculty incorporates undergraduate and graduate studies and continuing education. The mandate includes specialized research for the improvement of pedagogical practice, and broadly based research for the advancement of knowledge. The Faculty initiates and responds to change through a wide range of programs and a variety of field services. It seeks to prepare educators who will have a reasoned philosophy of education, an appreciation of what knowledge is of most worth, a genuine love of learning, and the ability to think critically. It strives to prepare educators who have an understanding of the past, a plan for the present, and a vision for the future.

The following Degree and Diploma Programs are offered through the Faculty of Education:

### 1.2 Degree Programs

1. Bachelor of Education (Primary/Elementary)
2. Bachelor of Education (Intermediate/Secondary)
3. Bachelor of Education (Intermediate/Secondary) Conjoint with the Diploma in Technology Education
4. Bachelor of Music Conjoint with Bachelor of Music Education
5. Bachelor of Music Education as a Second Degree
6. Bachelor of Education (Native and Northern)
7. Bachelor of Special Education
8. Bachelor of Education (Post-Secondary) as a First Degree
9. Bachelor of Education (Post-Secondary) as a Second Degree

### 1.3 Diploma Programs

Diploma in Post-Secondary Education

Diploma in Adult Teacher Education

Diploma in Native and Northern Education (T.E.P.L.)

### 1.4 Student Responsibility Clause

The Office of Undergraduate Student Services, Faculty of Education, will assist students with questions or problems which may arise concerning their programs. It is, however, the responsibility of students to see that their academic programs meet the Faculty of Education and the **UNIVERSITY REGULATIONS - General Academic Regulations (Undergraduate)**.

### 1.5 Teacher Certification

Teacher Certification is a Provincial responsibility. Students are advised to contact Teacher Certification and Records, Department of Education, P.O. Box 8700, St. John's, NL, A1B 4J6, for advice regarding Teacher Certification Regulations.

### 1.6 Admission

Note: *It is possible that individuals who have been convicted of a crime against a person may not be accepted into a school as required under the Faculty of Education degree and diploma regulations.*

- Admission to programs within the Faculty of Education is limited, selective and highly competitive. Meeting minimum admission requirements does not guarantee acceptance to a program. The Faculty reserves the right to limit the number of spaces available in each program. When the number of eligible applicants exceeds the number of spaces available in a particular program, preference may be given to students who are permanent residents of Newfoundland and Labrador.
- Applicants for admission to a program within the Faculty of Education must submit the appropriate completed application form and all supporting documentation to the Office of the Registrar in accordance with the deadlines specified for each program in the **Application Deadline Dates** table. Letters of reference and personal statement as required by the application form must be forwarded directly to the Faculty of Education. Students who must apply for admission/readmission to the University must also submit the General Application for Admission/Readmission to the Office of the Registrar within the deadlines specified in the University Diary.

**Application Deadline Dates**

Program	Commencement Date	Application Deadline
Bachelor of Education (Primary/Elementary) Consecutive Delivery Program	Spring	December 1
Bachelor of Education (Primary/Elementary) Integrated Delivery Program	Fall	December 1
Bachelor of Education (Intermediate/Secondary)	Fall	January 15
Bachelor of Education (Intermediate/Secondary) Conjoint with the Diploma in Technology Education	Spring	December 1
Bachelor of Music Education - first and second degree	Fall	January 15
Bachelor of Special Education	Fall	January 15
Native & Northern Teacher Education Programs	ongoing intake	
Bachelor of Education (Post-Secondary) - first and second degree - and Diploma in Post-Secondary Education	Fall Winter Spring	June 15 October 1 January 15
Diploma in Adult Teacher Education	Fall Winter Spring	June 15 October 1 January 15

- Admission to programs within the Faculty of Education is determined by a Selections Committee and is based on the criteria listed for each degree/diploma program. Applicants who are completing courses at this or another institution and for whom final and complete transcripts are not yet available may be granted provisional acceptance to the program to which they are applying pending the receipt of final transcripts. This provisional acceptance will remain valid until final transcripts are received. Provisionally accepted applicants may be granted a final acceptance upon review of the final transcript by the Selections Committee. The Faculty reserves the right to deny admission to a candidate who, in the opinion of the Selections Committee, is deemed unsuitable for admission to a program.
- Students who have been admitted to a program in the Faculty of Education requiring a teaching internship are advised that they may be assigned to any Provincial school district and are responsible for all travel and accommodation costs associated therewith.
- Students who have been admitted to a particular degree program offered by the Faculty of Education and who wish to change to another degree program within the Faculty must submit a new Faculty application form to the Office of the Registrar that will be considered in competition with all other students.
- In special circumstances, the Committee on Undergraduate Studies, on recommendation from the Admissions Committee may, at its discretion, consider an applicant or group of applicants as an exception to the requirements.
- Students who decline an offer of admission to the Faculty of Education, or who do not register for courses during the academic year in which admission is granted must, if they wish to be subsequently considered for admission, submit a new application in competition with other applicants.
- An unsuccessful applicant has the right to appeal against the decision of the Admissions Committee not to offer him/her a place, if it is felt by the applicant that the decision was reached on grounds other than those specified in the admission requirements listed in the Faculty of Education section of the Calendar. The appeal should be made in writing within twenty one days of the notification of the decision and should be directed to the Dean of Education. The letter should state clearly and fully the grounds for the appeal. If

the Dean of Education, in consultation with the Registrar, judges the grounds to be sufficient, the formal appeals mechanism will be initiated. Normally, appeals will only be considered in the case of procedural error and/or receipt of new information that is relevant to the application. Students are advised to refer to **UNIVERSITY REGULATIONS - General Academic Regulations (Undergraduate) - Appeal of Regulations** section of the University Calendar.

## 1.7 Regulations for Readmission and Advancement

These regulations apply to all programs except the Bachelor of Education (Intermediate/Secondary) and the Bachelor of Education (Intermediate/Secondary) Conjoint with the Diploma in Technology Education which have separate readmission and advancement regulations.

1. a. Following admission to a program of the Faculty of Education, all full-time students must obtain a semester average of at least 65% in order to remain in clear standing in the Faculty.
- b. These regulations will be applied to part-time students only after they have completed 12 consecutive credit hours on a part-time basis.
2. Students who fail to obtain a semester average of 65% but who are eligible for readmission under **UNIVERSITY REGULATIONS - General Academic Regulations (Undergraduate)** will be placed on probation in the Faculty. Probationary students who fail to obtain a 65% average during the next semester in which they complete courses will be required to withdraw from the Faculty.
3. Students completing the Bachelor of Education (Primary/Elementary), Bachelor of Music Conjoint with Bachelor of Music Education, or the Bachelor of Music Education as a Second Degree who attain a grade of FAL (fail) in their internship will either:
  - a. be required to withdraw from the program; or
  - b. with the recommendation of the Office of Undergraduate Student Services, Faculty of Education, repeat the internship in another school setting.
4. Students who have been required to withdraw from the Faculty of Education may, after a lapse of at least two semesters, apply for readmission to the Faculty. Students who are readmitted under this Clause will be considered probationary and must meet requirements stated in Clause 2. above.
5. Students who are required to withdraw from the University under **UNIVERSITY REGULATIONS - General Academic Regulations (Undergraduate)** will be required to withdraw from the Faculty of Education.
6. Students who have been required to withdraw from the Faculty on two occasions will be ineligible for future readmission.
7. Notwithstanding Clauses 1. through 4., the Committee on Undergraduate Studies on recommendation from the Admissions Committee reserves the right to require students to withdraw from the Faculty at any time if, in the opinion of the Committee, they are deemed unsuitable for continued attendance in the programs.
8. Students who have been required to withdraw from the Faculty may register only in those Education courses listed as applicable for non-education students.
9. In exceptional circumstances, the Committee on Undergraduate Studies may waive the Readmission and Advancement regulations for the Faculty of Education as stated above.

## 1.8 Regulations for Readmission and Advancement for the Bachelor of Education (Intermediate/Secondary) and Bachelor of Education (Intermediate/Secondary) Conjoint With the Diploma in Technology Education

1. Students must successfully complete all courses, attain an overall semester average of at least 65%, and a grade of PAS (pass) in the internship. Students failing to meet any of the above criteria will be required to withdraw from the program.
2. Notwithstanding Clause 1., the Committee on Undergraduate Studies, on recommendation from the Admissions Committee, reserves the right to require students to withdraw from the Faculty at any time if, in the opinion of the Committee, they are deemed unsuitable for continued attendance in the programs.
3. In exceptional circumstances, waiver of these regulations may be granted by the Committee on Undergraduate Studies, Faculty of Education, on advice of the Office of Undergraduate Student Services.

## 1.9 Registration in Education Courses (Non-Education Students)

Registration in Education courses is normally restricted to those students who have been admitted to a degree or diploma program in the Faculty of Education. Students in first year or students in other Faculties or Schools who have completed not fewer than 24 credit hours may register for the following courses in Education without acceptance to a program:

Education 2040, Education 2800, Education 2801, Education 2803, Education 3210, Education 3211, Education 3560, Education 3570, Education 3571, Education 3590, and Education 3660

Such students are advised to consult degree regulations governing their particular degree program to determine which, if any, of the above courses can be applied to their degree program. The above notwithstanding, students needing Education courses for Provincial Vocational Education Certification may, with permission of the Office of Undergraduate Student Services, be allowed to register for the required courses.

## 1.10 Registration in Education Courses (Teacher Certification Upgrading)

Students having completed a degree program in Education or equivalent who wish to register in Education courses for certification upgrading purposes should contact the Office of Undergraduate Student Services at least two weeks in advance of registration for permission/procedure.

## 1.11 Bachelor of Education (Primary/Elementary)

The Bachelor of Education (Primary/Elementary) is a 150 credit hour program designed to prepare teachers for kindergarten through grade six. All students will attend full time during the Professional Year which involves both a specific set of courses and a field experience. The Professional Year is followed by a one semester teaching internship and a subsequent semester of study intended to allow students to build on strengths and remedy weaknesses that may have become apparent during the internship. Basic computer keyboarding skills will be expected during the first semester of this program.

The Bachelor of Education (Primary/Elementary) is offered in two delivery formats:

Bachelor of Education (Primary/Elementary) Integrated Delivery Program

Bachelor of Education (Primary/Elementary) Consecutive Delivery Program  
Refer to the **Application Deadline Dates** table for application deadlines.

### 1.11.1 Admission

1. Applications for admission for both Integrated and Consecutive Delivery are considered together. Consideration will be given to the courses for which students are registered at the time of assessment of applications. Applicants for Integrated Delivery who have completed all requirements for admission by the end of the Spring semester of the year that admission is being sought will be considered as time and resources permit.
2. To be considered for admission students must have successfully completed 60 credit hours as outlined in Clauses a. - h. below with a cumulative average of at least 65% or an average of at least 65% on the last attempted 30 credit hours. Students applying to the Consecutive delivery option must have completed a total of 78 credit hours including a completed Focus Area. The 60 credit hours are:
  - a. twelve credit hours in English including at least 6 credit hours at the 2000 level or above
  - b. Mathematics 1050 and 1051; or Mathematics 1000; or a Focus Area in Mathematics
  - c. six credit hours in Psychology
  - d. Science 1150 and 1151; or 9 credit hours in Science (3 credit hours each to be chosen from Biochemistry, Biology, Chemistry, Earth Science, Environmental Science, or Physics); or a Focus Area in Science
  - e. six credit hours chosen in any combination from Anthropology, Economics, Folklore, Geography, History, Political Science, Sociology
  - f. three credit hours in French, or equivalent
  - g. fifteen credit hours as part of a Focus Area
  - h. additional credit hours from areas other than Education.
3. In assessing applications to the Bachelor of Education (Primary/Elementary) degree program, consideration will be given to student's:
  - a. average in the courses required for admission in Clauses 2. a. to e. above;
  - b. overall academic performance; and
  - c. personal statement, references and resume as outlined on the application to the Faculty.

### 1.11.2 Regulations for the Degree of Bachelor of Education (Primary/Elementary)

1. Candidates for the degree of Bachelor of Education (Primary/Elementary) will be required to complete a minimum of 150 credit hours in accordance with Table 1 or Table 2 below. Including the courses required for admission and completion of the focus area, a minimum of 75 of these credit hours will be in non-Education courses. Students:
  - a. will normally follow the appropriate Program Plan as outlined below;
  - b. must enrol full-time during the Professional Year; and
  - c. may enrol in the Internship only after successful completion of the Professional Year.

Students will normally complete the Bachelor of Education (Primary/Elementary) in the academic terms, sequence and course load as set out in either **Table 1, Bachelor of Education (Primary/Elementary) Integrated Delivery Program** or in **Table 2, Bachelor of Education (Primary/Elementary) Consecutive Delivery Program**.

### 1.11.3 Regulations for the Bachelor of Education (Primary/Elementary) Integrated Delivery Program

To complete the 150 credit hour Bachelor of Education (Primary/Elementary) Integrated Delivery Program students must have 75 credit hours from areas other than Education, including a completed focus area, plus the 75 credit hours in Education specified in **Table 1 Bachelor of Education (Primary/Elementary) Integrated Delivery Program Plan**.

**Table 1 Bachelor of Education (Primary/Elementary) Integrated Delivery Program Plan**

<p><b>Education Semester One - Fall</b>            Education 3618            Education 3951            HKR 2001            6 credit hours in Non-education Electives</p>
<p><b>Education Semester Two - Winter</b>            Education 3484            Education 3619            Education 3952            6 credit hours in Non-education Electives</p>
<p><b>Education Semester Three - Fall (Professional Year Semester One)</b>            Four Education courses from 3120, 3131, 3273, 3312, 3322, 3940, 3962 (to be determined by the Office of Undergraduate Student Services)            One of Education 2050, 2194, 2530*, 3050, 3755, 4205, 4240 or 4242            *Required for students completing a music focus area.            Non-credit Field Experience (five days)</p>
<p><b>Education Semester Four - Winter (Professional Year Semester Two)</b>            Four additional Education courses from 3120, 3131, 3273, 3322, 3543, 3940, 3962 (to be determined by the Office of Undergraduate Student Services)            One of Education 2050, 2194, 2530*, 3050, 3755, 4205, 4240 or 4242            *Required for students completing a music focus area.            Non-credit Field Experience (five days)</p>
<p><b>Education Semester Five - Fall</b>            Education 401X: Undergraduate Teaching Internship (15 credit hours)</p>
<p><b>Education Semester Six* - Winter</b>            Education 4362            Education 4383            Education 4425            6 credit hours in Education Electives            *Students have the option of completing semester six courses in the Spring semester following the Professional Year.</p>

### 1.11.4 French Immersion Option

The French Immersion Option is only available in the Bachelor of Education (Primary/Elementary) Integrated Delivery Program.

In addition to meeting the Admission Requirements for the Bachelor of Education (Primary/Elementary) Degree Program, students applying for this option must have French as a Focus Area. Admitted students will spend the two semesters of the Professional year in a French milieu.

These students must meet all requirements for the Bachelor of Education (Primary/Elementary) Integrated Delivery Program except as modified in Clauses 1.-3. below:

Students must successfully complete:

1. prior to the beginning of the Professional Year
  - a. at least 27 credit hours in French, including French 3100 and 3101,
  - b. either high school French Immersion including Francais 3202 or at least one semester of study in a French milieu,
2. the Professional Year in a French milieu, including the equivalent of Education 4155 and Education 3050, and
3. the internship in a French Immersion setting.

Students who are interested in the French Immersion Option should contact the Office of Undergraduate Student Services, Faculty of Education, at their earliest opportunity.

### 1.11.5 Regulations for the Bachelor of Education (Primary/Elementary) Consecutive Delivery Program

To complete the 150 credit hour Bachelor of Education (Primary/Elementary) Consecutive Delivery Program students must have at least 75 credit hours from areas other than Education and the 69 credit hours in Education specified in **Table 2 Bachelor of Education (Primary/Elementary) Consecutive Delivery Program Plan**. The additional 6 credit hours required for the degree may be either Education or non Education credits.

**Table 2 Bachelor of Education (Primary/Elementary) Consecutive Delivery Program Plan**

<p><b>Spring - Professional Year Semester I: 6 Education courses (18 credit hours)</b>            Education 3120            Education 3273            Education 3312            Education 3618            Education 3951            Education 3962</p>
<p><b>Fall - Professional Year Semester II: 6 Education courses (18 credit hours)</b>            Education 3322            Education 3484            Education 3543            Education 3619            Education 3940            3 credit hours in an Education Elective</p>
<p><b>Winter - Semester III: Teaching Internship and 1 Education course (18 credit hours)</b>            Education 401X            Education 4425</p>
<p><b>Spring - Semester IV: 6 courses (18 credit hours)</b>            Education 3131            Education 3952            Education 4362            Education 4383            3 credit hours in an Education Elective            HKR 2001</p>

Due to the nature of the French Immersion option of the primary/elementary program, the Consecutive Delivery Program is not available to applicants preparing to be French Immersion teachers.

### 1.11.6 Focus Areas:

#### **Art (18 credit hours):**

Visual Arts courses in Art History at Sir Wilfred Grenfell College may be used to satisfy this requirement in whole or in part.

#### **English (24 credit hours):**

1. Six credit hours at the 1000 level
2. 2390
3. Three credit hours chosen from 2000, 2001, 2005-2007, 3200, 3201, 3395
4. Three credit hours chosen from 2002-2004, 2010 or 2020, 2350, 2351
5. Six credit hours chosen from 2150, 2151, 2152, 2155, 2156, 3145-3148, 3155-3158
6. Three additional credit hours at the 2000 level or above

#### **Folklore (24 credit hours):**

1. 1000 or 2000
2. 2100, 2300, 2401, 2500
3. Three credit hours chosen from 3450 or 3930
4. Six credit hours chosen from the 3000 or 4000 level

#### **French (18 credit hours):**

A maximum of 6 credit hours at the 1000 level

1. 2100 or equivalent
2. 2101 or equivalent
3. 2300 or equivalent
4. 3100 or 3101 or equivalent
5. At least 5 weeks at an approved francophone institution in a French speaking area

It is recommended that students complete at least one of 2900, 3650, 3651, 3652, or 3653

Note: *Students may wish to select the French Immersion option listed at the end of Program Plan: Bachelor of Education (Primary/Elementary).*

#### **Geography (18 credit hours):**

1. 1050, 2001, 2102, 2195, 2302, and 2425; or 1000 and 1001, or 1010 and 1011,
2. 12 credit hours in courses chosen from 2001, 2102, 2195, 2302, and 2425

#### **History (18 credit hours):**

1. Six credit hours chosen from 1010-1015, 1100, 1101, 1200
2. Six credit hours at the 2000 level
3. 3110, 3120



**Linguistics (18 credit hours):**

1. 1100 or 2100
2. 1103 or 2103, 1104 or 2104, 2210
3. Six credit hours chosen from 3000, 3100, 3104, 3105, 3150, 3155, 3201, 3212, 3500, 3850

**Mathematics (18 credit hours including):**

No more than 6 credit hours at the 1000 level and at least 3 credit hours at the 3000 level.

**Music (18 credit hours):**

1. 1120
2. Six credit hours chosen from 2011, 2012, 3014 or 3015, 3016
3. Six credit hours chosen from 3017, 3018, 4440
4. Three credit hours chosen from 2021, 2022, 2023, 2611 or 2614

**Physical Education (HKR) (18 credit hours):**

1. 1000, 2210, 2300
2. Nine credit hours chosen from 1001, 2002, 2310, 2320, 3300, 3360

**Religious Studies (18 credit hours including):**

1. 1000
2. Three credit hours from 2013, 2130, 2140, 2330, 2340
3. Three credit hours from 2400, 2410, 2420, 2425, 2430
4. Three credit hours from 2350, 2610, 2810, 2811, 2812, 2820, 2830
5. Six credit hours at the 3000 level or above

**Science (18 credit hours including):**

At least 6 credit hours in each of two subject areas selected from Biochemistry, Biology, Chemistry, Earth Science, Environmental Science, or Physics.

**1.12 Bachelor of Education (Intermediate/Secondary)**

The Bachelor of Education (Intermediate/Secondary) is a second degree program designed to prepare Intermediate and Secondary School teachers. All students attend full-time and should graduate in one calendar year. The program is designed to provide students with an early field experience, a sequenced set of courses prior to a full semester internship and a range of courses after the internship designed so that students can reflect on their school experiences and make further connections between theory and practice.

**1.12.1 Admission**

1. Refer to the **Application Deadline Dates** table for application deadlines. Consideration will be given to the courses for which students are registered at the time of application. Applicants who will have completed all requirements for admission by the end of the Spring semester of the year that admission is being sought will be considered as time and resources permit. Students attending institutions other than Memorial University of Newfoundland must supply transcripts indicating Winter semester grades no later than June 15.
2. To be considered for admission to the Bachelor of Education (Intermediate/Secondary) Degree Program, individuals must have:
  - a. been awarded a Bachelor's Degree from a university recognized by Memorial University of Newfoundland;
  - b. i. completed 36 credit hours in a subject listed under Academic Disciplines in Clause 3. below (Religious Studies, Business Studies and Newfoundland Studies cannot be used to satisfy the 36 credit hour requirement), and
    - ii. completed 24 credit hours in a subject listed under Academic Disciplines in Clause 3. below but different from that in b. i., and
  - c. achieved an overall average of at least 65% in each of the sets of courses in b. i. and b. ii.
3. Academic Disciplines are deemed to be the disciplines on the following list. Courses from other disciplines deemed by the Admissions Committee to be equivalent to courses in any of the listed Academic Disciplines will be acceptable.

Biochemistry**	Economics	History	Religious Studies
Biology**	English	Mathematics (Pure and Applied	Theatre Arts
Business Studies***	Environmental Science**	Mathematics, Statistics)	Visual Arts
Canadian Studies	French	Newfoundland Studies	
Chemistry**	General Science Physics**	Physical Education*	
Earth Sciences**	Geography	Political Science	

\*In order to be considered for admission within this Academic Discipline, students must have completed courses in the following areas: Anatomy, Physiology, Motor Learning, Kinesiology, Evaluation and Testing in Physical Education, Primary/Elementary Physical Education Curriculum and Teaching, Issues and Trends in HPERS and a minimum of 6 activities.

\*\*Students who use General Science as an Academic Discipline may use courses from these separate science disciplines in any combination, but must complete a minimum of 12 credit hours in each separate science discipline used.

\*\*\*Students who use Business Studies as an academic discipline must have at least a minor in Business Administration.

Notes: 1. When calculating averages in the first and second teachable areas, no more than two 1000-level courses in each of the first and second teachable areas will normally be used.

2. A limited number of program spaces are allocated to each discipline. Students who are admitted with a particular Academic Discipline and who wish to change to a different Academic Discipline must obtain permission of the Office of Undergraduate Student Services. Such changes may not be possible in particular areas.

3. Applicants are advised that admission to the program on the basis of academic disciplines is dependent on sufficient numbers of students to warrant the offering of applicable methodology courses in those disciplines in any given year.

4. Candidates who are registered in their final semester of their first Bachelor's Degree program during the Winter semester must have satisfied the academic requirements set out in Clause 2. above upon completion of their first degree program.
5. In assessing applications to the Bachelor of Education (Intermediate/Secondary) Program, consideration will be given to the following:

- a. average in each of the two academic disciplines;
  - b. overall academic performance; and
  - c. personal statement, references and resume as outlined on the application to the Faculty.
6. Because of the structured, sequential nature of this program, students must attend full-time. Students who drop any course which is part of the program will be dropped from the entire program.
  7. Students who have been admitted to the program but choose not to attend in the Fall semester of their year of admission will lose their admission status. Such a student may reapply for admission at a later date, and must submit a new application which will be considered in competition with those of all other applicants.

### 1.12.2 Regulations for the Degree of Bachelor of Education (Intermediate/Secondary)

1. A candidate for the degree of Bachelor of Education (Intermediate/Secondary) shall complete 51 credit hours; including a non-credit field experience, 36 credit hours, and a 15 credit hour internship in a sequence as prescribed by the Program Plan (see below). Candidates must also have complied with the Regulations for Readmission and Advancement for this program.
2. The non-credit early field experience shall include a minimum of thirty hours of school visitation during the first semester of the program.
3. The 36 credit hours shall include:
  - a. twenty-one credit hours as follows:
    - i. Education 4005, 4260, 4361, 4381, and 4950
    - ii. Two of the following: Education 4120, 4121, 4142, 4154, 4161, 4174, 4175, 4180, 4181, 4190, 4203. These methodology courses must be chosen to match the Academic Disciplines under which the student was admitted. Those whose discipline is Geography are required to do either Education 4180 or 4174. Those whose area is Social Studies (academic disciplines of Business Studies, Canadian Studies, Economics, Geography, History, Newfoundland Studies, and Political Science) are required to do Education 4180. Students whose first and second academic disciplines are in Social Studies are required to do Education 4180 and 4181. Students whose first and second academic disciplines are in the sciences (Biochemistry, Biology, Chemistry, Earth Sciences, Environmental Sciences, General Science, Physics) are required to do Education 4174 and 4175.
  - b. fifteen credit hours in electives chosen from the list below:  
Education 2222, 2900, 3210, 3211, 3255, 3565, 3570, 3571, 3943, 4144, 4151, 4163, 4172, 4182, 4204, 4240, 4242, 4275, 4340, 4350, 4354, 4356, 4382, 4420, 4425, 4480, 4580, 4610, 4945.

Note: Students intending to apply to the Bachelor of Special Education degree program should complete Education 4240 or Education 4242 and 4350.

### 1.12.3 Bachelor of Education (Intermediate/Secondary) Program Plan

#### Semester 1 (Fall)

Classroom Observation  
Education 4361  
Education 4005  
Education 4260  
Two Methods Courses from Clause 3.a.ii.  
Education 4950

#### Semester 2 (Winter)

Education 405X

#### \*Semester 3 (Spring)

Education 4381  
5 Electives from Clause 3. b.

\*Courses may be offered in the Spring, Intersession and/or Summer Session.

## 1.13 Bachelor of Education (Intermediate/Secondary) Conjoint with the Diploma in Technology Education

This program is currently under review and may not be offered May 2007. For further information please contact the Office of Undergraduate Student Services, Faculty of Education.

The Bachelor of Education (Intermediate/Secondary) Conjoint with the Diploma in Technology Education is a program designed to prepare both Intermediate/Secondary and Technology Education teachers. Students in the program will complete a number of courses that address the development of basic skills and competencies in a variety of technological areas and how to apply them through design and problem solving processes in a school classroom/laboratory setting. All students attend full-time and should graduate in four semesters. This conjoint program is designed to provide students with an early field experience, a sequenced set of courses prior to a full semester internship and a range of courses after the internship designed so that students can reflect on their school experiences and make further connections between theory and practice.

### 1.13.1 Admission

1. Consideration will be given to the courses for which students are registered at the time of application. Refer to the **Application Deadline Dates** table for application deadlines. Students attending institutions other than Memorial University of Newfoundland must supply transcripts indicating Fall semester grades no later than February 1.
2. To be considered for admission to the Bachelor of Education (Intermediate/Secondary) Conjoint with the Diploma in Technology Education program individuals must have:
  - a. been awarded a Bachelors Degree from a university recognized by Memorial University of Newfoundland;
  - b. completed 36 credit hours in a subject listed under Academic Disciplines in Clause 3. below; and
  - c. achieved an overall average of at least 65% in the courses chosen to meet b. above.
3. Academic Disciplines are deemed to be the disciplines on the following list. Courses from other disciplines deemed by the Admissions Committee to be equivalent to courses in any of the listed Academic Disciplines will be acceptable.

Biochemistry**	Economics	General Science	Physics**
Biology**	English	History	Political Science
Canadian Studies	Environmental Science**	Mathematics (Pure and Applied Mathematics, Statistics)	Theatre Arts
Chemistry**	French	Physical Education*	Visual Arts
Earth Sciences**			

\*In order to be considered for admission within this Academic Discipline, students must have completed courses in the following areas: Anatomy, Physiology, Motor Learning, Kinesiology, Evaluation and Testing in Physical Education, Primary/Elementary Physical Education Curriculum and Teaching, Issues and Trends in HPERS and a minimum of 6 activities.

\*\* Students who use General Science as an Academic Discipline may use courses from these separate science disciplines in any combination, but must complete a minimum of 12 credit hours in each science discipline used.

Notes: 1. When calculating the average in the 36 credit hours required under clause 2. b. above, no more than two 1000-level courses will normally be used.

2. A limited number of program spaces are allocated to each discipline. Students who are admitted with a particular Academic Discipline and who wish to change to a different Academic Discipline must obtain permission of the Office of Undergraduate Student Services. Such changes may not be possible in particular areas.

3. Applicants are advised that admission to the program is dependent on sufficient numbers of students to warrant the offering of applicable methodology courses in those disciplines in any given year.

4. Candidates who are registered in their final semester of their first Bachelor's Degree program during the Winter semester must have satisfied the academic requirements set out in Clause 2. above upon completion of their first degree program.
5. In assessing applications to the Bachelor of Education (Intermediate/Secondary) Conjoint with the Diploma in Technology Education Program, consideration will be given to the following:
  - a. average in courses in clause 2. b.;
  - b. overall academic performance; and
  - c. personal statement, references and resume as outlined on the application to the Faculty.
6. Because of the structured, sequential nature of this program, students must attend full-time. Students who drop any course which is part of the program will be dropped from the entire program.
7. Students who have been admitted to the program but choose not to attend in the Spring semester of their year of admission will lose their admission status. Such a student may reapply for admission at a later date, and must submit a new application which will be considered in competition with those of all other applicants.

### 1.13.2 Regulations for the Degree of Bachelor of Education (Intermediate/Secondary) Conjoint with the Diploma in Technology Education

1. A candidate for the degree of Bachelor of Education (Intermediate/ Secondary) conjoint with the Diploma in Technology Education shall complete 66 credit hours including a non-credit field experience, 27 credit hours in Intermediate/Secondary Education, 24 credit hours in Technology Education, and a 15 credit hour internship in a sequence as prescribed in the **Bachelor of Education (Intermediate/Secondary) Conjoint With the Diploma in Technology Education Program Plan**. Candidates must also have complied with the Regulations for Readmission and Advancement for this program.
  2. The non-credit early field experience shall include a minimum of thirty hours of school visitation during the second semester of the program.
  3. The 27 credit hours in Intermediate/Secondary Education shall include:
    - a. Eighteen credit hours as follows:
      - i. Education 4005, 4260, 4361, 4381, and 4950
      - ii. One of the following: Education 4120, 4121, 4142, 4154, 4161, 4174, 4180, 4190. The methodology course must be chosen to match the Academic Discipline under which the student was admitted. Those whose discipline is Geography are required to do either Education 4180 or 4174. Those whose area is Social Studies (academic disciplines of Canadian Studies, Economics, Geography, History, and Political Science) are required to do Education 4180.
    - b. nine credit hours in electives chosen from:  
Education 2222, 2900, 3210, 3211, 3255, 3565, 3570, 3571, 4144, 4151, 4163, 4172, 4182, 4240, 4242, 4275, 4340, 4350, 4354, 4356, 4382, 4420, 4425, 4480, 4580, 4610.
- Note: Students intending to apply to the Bachelor of Special Education degree program should complete Education 4240 or Education 4242 and 4350.
4. The 24 credit hours in Technology Education shall include Education 2711, 2750, 2751, 3750, 3751, 4750, 4751, 4752.

### 1.13.3 Bachelor of Education (Intermediate/Secondary) Conjoint with the Diploma in Technology Education Program Plan

#### \*Semester 1 (Spring)

Education 2711  
Education 2750  
Education 2751  
Education 3750  
Education 3751

#### Semester 2 (Fall)

Classroom Observation  
Education 4361  
Education 4005  
Education 4260  
One Method Course from 3.a.ii. and Education 4751  
Education 4950

#### Semester 3 (Winter)

Education 405X

#### \*Semester 4 (Spring)

Education 4381

Education 4750  
 Education 4752  
 3 electives from clause 3.b.

\*Courses may be offered in the Spring, Intersession and/or Summer Session.

## 1.14 Bachelor of Music Education

The Bachelor of Music Education Program is designed to prepare music teachers in all facets of school music education: foundations of music education; and primary/elementary, intermediate/secondary classroom music; choral and instrumental music education. The program consists of 30 credit hours of course work in music education and general foundational education and a 15 credit hour teaching internship. The program is delivered in two formats: Bachelor of Music Conjoint with Bachelor of Music Education and Bachelor of Music Education as a Second Degree.

Refer to the **Application Deadline Dates** table for application deadlines.

## 1.15 Bachelor of Music Conjoint with Bachelor of Music Education

### 1.15.1 Admission

- Applications for admission are considered once a year normally to the Fall semester. Consideration will be given to the Winter semester courses for which students are registered at the time of application.
- At the time of application, students must have been formally admitted to, and be in clear standing with, the School of Music.
- To be considered for admission, students must have successfully completed a minimum of 45 credit hours with either a cumulative average of at least 65% or an average of at least 65% on their last attempted 30 credit hours.

Within the 45 credit hours, students must have completed the following:

- at least 6 credit hours in English and/or research/writing;
- at least 3 credit hours from the following: Music 3221, 3222, 3231, 3232, 3233, 3241, 3242, 3261, 3281, 3282;
- at least 12 credit hours in Music, in addition to the 3 credit hours used to satisfy Clause 3.b. above.

*Note: To ensure appropriate academic advising of candidates, a personal interview and demonstration of proficiency in basic keyboard and aural skills will be conducted during the Fall Semester following admission. Sample materials will be made available from faculty members prior to the skills demonstration.*

- In assessing applications, consideration will be given to the following:
  - average in the courses required for admission in Clause 3. above;
  - overall academic performance; and
  - personal statement, references and resume as outlined on the application to the Faculty. One reference must be from a faculty member of the School of Music.

## 1.16 Regulations for the Conjoint Degrees of Bachelor of Music and Bachelor of Music Education

- A candidate for the Conjoint Degrees of Bachelor of Music and Bachelor of Music Education shall be required to complete a minimum of 159 credit hours in accordance with the regulations for the Degree of Bachelor of Music, following General Musical Studies major and Clause 2. below.
- A candidate shall complete the following 45 credit hours in Education:
  - Two of Education 3618, 3619, 4240, 4260
  - Education 4362 or 4383
  - Education 2510, 2520, 2530, 3920 (including MUN Lab Band and Orchestra), 3925 and 4830
  - Education 403X (15 credit hour Internship)
  - Three other credit hours in Education other than Music Education. It is recommended that these 3 credit hours be used toward the acquisition of instructional content in a second teachable area.
- A maximum of two of the following courses in music education may be used to fill requirements of Regulation 6.d. of the Bachelor of Music and Bachelor of Music Education Conjoint Degree Program: 4835, 4840, 4845, 4850, 4855, 4860.

## 1.17 Bachelor of Music Education as a Second Degree

### 1.17.1 Admission

- Applications for admission are considered once a year normally to the Fall semester. Consideration will be given to the Winter semester courses for which students are registered at the time of application.
- A candidate who has been awarded a Bachelor's degree in Music (or equivalent) from a recognized post-secondary institution may be admitted to the program leading to the degree of Bachelor of Music Education provided that the pattern of courses for the first degree is acceptable to the Selections Committee of the Faculty of Education.

## 1.18 Regulations for the Bachelor of Music Education as a Second Degree

- The degree of Bachelor of Music Education may be awarded upon the successful completion of at least 30 additional credit hours in accordance with clause 2. below.
- A candidate shall complete the following 45 credit hours in Education:
  - Two of Education 3618, 3619, 4240, 4260
  - Education 4362 or 4383
  - Education 2510, 2520, 2530, 3920 (including MUN Lab Band and Orchestra), 3925 and 4830
  - Education 403X
  - Three other credit hours in Education other than Music Education. It is recommended that these 3 credit hours be used toward

the acquisition of instructional content in a second teachable area.

Note: To ensure appropriate academic advising of candidates, a personal interview and demonstration of proficiency in basic keyboard and aural skills will be conducted during the Fall Semester following admission. Sample materials will be made available from faculty members prior to the skills demonstration.

## 1.19 Bachelor of Education (Native and Northern)

The Bachelor of Education (Native and Northern) is a teacher education program designed for Native students in Labrador who intend to pursue a teaching career in the communities of northern Labrador. It would be of particular interest to students who wish to continue their studies beyond the Diploma in Native and Northern Education.

### 1.19.1 Regulations for Admission/Readmission and Advancement to the Bachelor of Education (Native and Northern)

- Students who wish to enter the program must submit an application to the Office of Undergraduate Student Services, Faculty of Education.
- Applicants to the Bachelor of Education (Native and Northern) must complete the general application form for admission to the University and the application form for admission to the Faculty of Education, Native and Northern Program.
- Normally, to be considered for admission, a student must have completed a minimum of 15 credit hours with an average of at least 55% in those courses and be in clear standing.  
Note: Students may be considered for conditional admission to the program upon admission to the University. Students admitted conditionally will be admitted in clear standing after successful completion of 15 credit hours with an average of not less than 55% percent.
- Students who have completed more than 15 credit hours prior to admission to the program will be permitted to apply those credit hours, where appropriate, towards the Bachelor of Education (Native and Northern) provided an average of at least 60% has been obtained in all courses beyond the first 15 credit hours.
- Students who have been admitted to the Bachelor of Education (Native and Northern) will normally be governed by Regulations 2. and 4. - 9. of the Regulations for Readmission and Advancement of the Faculty of Education. For this program only, advancement regulations will be applied upon the completion of each 15 credit hour segment throughout the duration of the program and will be assessed on the basis of the average obtained on those 15 credit hours.
- Students who have not met the requirements for direct entry from high school, but are eligible for entry on other criteria, will be assessed for literacy in English through procedures in accordance with University regulations. Where necessary, courses may be provided to give students an opportunity to upgrade their literacy skills.
- Within the **UNIVERSITY REGULATIONS - General Academic Regulations (Undergraduate) - Residence Requirements**, candidates for the Bachelor of Education (Native and Northern) Degree shall have completed a minimum of 12 credit hours as full time students through attendance at classes for the duration of at least one semester on a campus of Memorial University of Newfoundland.

### 1.19.2 Regulations for Students on the Primary/Elementary Education Route

- Candidates for the degree of Bachelor of Education (Native and Northern), Primary/Elementary route, shall be required to complete a minimum of 150 credit hours in accordance with the clauses 2. - 6. below and in consultation with the Office of Undergraduate Student Services.
- The following academic credit hours are compulsory:
  - twelve credit hours in English
  - six credit hours in Math
  - six credit hours in Science
  - six credit hours in Anthropology
  - six credit hours in Linguistics (Inuktitut or Innu-aimun)
  - three credit hours in Psychology]
  - a concentration of four courses from each of two of the following subject areas: Aboriginal Studies, Art, Folklore\*, French, Geography, History, Linguistics\*, Mathematics, Music/Music Education, Physical Education, Religious Studies, Science, Theatre Arts\*  
\* Note: Only one of these subject areas may be chosen.
- Candidates shall be required to complete a minimum of 60 credit hours in education, to be determined from an approved list, in consultation with the Office of Undergraduate Student Services. Included in those credit hours will be:
  - At least 3 credit hours in Education from each of the following areas:  
Administration, Assessment of Primary/Elementary Children, Arts, Childhood Development, Children's Literature, Curriculum Development, Introductory Overview of Native Education, Language Arts, Mathematics, Native Education Issues and Trends, Reading, Science, Social Studies, Social Context of Education, Tests and Measurement, Teaching English as a Second Language, Teaching Strategies
  - Three credit hours from one of the following areas:
    - Teaching of Inuktitut or Innu-aimun for students who are proficient speakers of one of these languages
    - Language and culture for students who are not proficient speakers of Inuktitut or Innu-aimun
  - Further credit hours in Education to complete the required total of 60 must be chosen from appropriate course offerings of the Faculty of Education, in consultation with the Office of Undergraduate Student Services.
- Candidates who are proficient speakers of Inuktitut or Innu-aimun and who plan to teach one of these languages and/or plan to teach in one of these languages shall complete at least 3 credit hours from each of the following areas:
  - Language literacy skills
  - Language teaching skills
- In addition to satisfying clause 3 above, all candidates shall be required to complete a 15 credit hour internship (Ed. 404X).

Note: Candidates who have completed the Diploma in Native and Northern Education in Labrador and have successfully completed at least five years as a teaching assistant or certified teacher may apply to the Office of Native Education for a waiver of the internship requirement. In cases where waivers are granted, candidates will be required to complete 15 credit hours in Primary or Elementary Education to be

*determined from an approved list, in consultation with the Office of Undergraduate Student Services.*

- b. Students may enrol in the Internship Program only after successful completion of the credit hours required in clauses 2. and 3. a. and b. above.
6. Further credit hours to complete the required total of 150 may be selected from any subject area outside of Education or from other credit hours in Education which are approved for the primary/elementary area.

### 1.19.3 Regulations for Students on the Secondary Education Route

1. Candidates for the degree of Bachelor of Education (Native and Northern), Secondary route, shall be required to complete a minimum of 150 credit hours in accordance with clauses 2. - 6. below and in consultation with the Office of Undergraduate Student Services.
2. The following academic credit hours are compulsory:
  - a. six credit hours in English
  - b. six credit hours in Anthropology
  - c. six credit hours in Linguistics (Inuktitut or Innu-aimun)
  - d. three credit hours in Psychology
  - e. Either
    - i. A concentration of eight courses in each of two of the following areas: Aboriginal Studies, Art, Biochemistry, Biology, Canadian Studies, Chemistry, Computer Science, Earth Sciences, Economics, English, Folklore\*, French, Geography, History, Linguistics\*, Mathematics (Pure and Applied Mathematics, Statistics), Newfoundland Studies\*, Physical Education, Physics, Political Science\*, Religious Studies, and Theatre Arts\*
 

*\* Note: Only one of these subject areas may be chosen.*
    - Or
    - ii. A concentration of eight courses from one subject area in clause 2. e. i. above, and four courses from each of two of the other subject areas, other than the subject area chosen for the eight-course subject area concentration.

Courses from other disciplines deemed to be equivalent to courses in any of the above listed academic disciplines will be accepted.
3. Candidates shall be required to complete a minimum of 54 credit hours in Education, to be determined from an approved list, in consultation with the Office of Undergraduate Student Services. Included in those credit hours will be:
  - a. At least 3 credit hours in Education from each of the following areas:  
Administration, Curriculum Development, Educational Psychology, Introductory Overview of Native Education, Native Education Issues and Trends, Reading, Social Context of Education, Student Evaluation, Teaching English as a Second Language, Teaching Strategies
  - b. Appropriate teaching methodology courses to correspond with concentrations in clause 2. e. to be determined from an approved list, in consultation with the Office of Undergraduate Student Services
  - c. Three credit hours from one of the following areas:
    - i. Teaching of Inuktitut or Innu-aimun for students who are proficient speakers of one of these languages
    - ii. Language and culture for students who are not proficient speakers of Inuktitut or Innu-aimun
  - d. Further credit hours in Education to complete the required total of 54 must be chosen from appropriate course offerings of the Faculty of Education, in consultation with the Office of Undergraduate Student Services.
4. Candidates who are fluent speakers of Inuktitut or Innu-aimun, and who plan to teach one of these languages and/or plan to teach in one of these languages, shall complete at least 3 credit hours from each of the following areas:
  - a. Language literacy skills
  - b. Language teaching skills

*Note: These courses are cross listed as Education/Linguistics. Where candidates complete four courses under clause 4., in addition to the two linguistics courses required in clause 2. c., only one additional four course concentration shall be required under clause 2. e. ii.*
5. a. In addition to satisfying clause 3. above, all candidates shall be required to complete a 15 credit hour internship (Ed. 404X)
 

*Note: Candidates who have completed the Diploma in Native and Northern Education in Labrador and have successfully completed at least five years as a teaching assistant or certified teacher may apply to the Office of Native Education for a waiver of the internship requirement. In cases where waivers are granted, candidates will be required to complete 15 credit hours in Secondary Education to be determined from an approved list in consultation with the Office of Undergraduate Student Services.*
- b. Students may enrol in the Internship Program only after successful completion of the credit hours required in clauses 2. and 3. a., b., and c. above.
 

*Note: Students who do not register for courses during the academic year in which admission is granted will be dropped from the program and must, if they wish to be subsequently considered for admission, submit a new application which will be considered in competition with those of all other applicants.*
6. Further credit hours to complete the required total of 150 may be selected from any subject area outside of Education or from other credit hours in Education which are approved for the secondary area.

## 1.20 Bachelor of Special Education

This degree program is for the preparation of Special Education teachers and is available through part-time or full-time study. A limited number of courses are available through distance education. Candidates must comply with the University's Regulations for a Second Degree as outlined in the General Regulations section of the Calendar. Refer to the **Application Deadline Dates** table for application deadlines.

### 1.20.1 Admission

1. Consideration will be given to the courses for which students are registered at the time of application. Provisional acceptance may be granted to students who will successfully complete all prerequisites prior to commencement of Program.
2. To be considered for admission candidates shall have a minimum of a 65% average in the last 60 attempted credit hours and also meet the following requirements:

- a. hold a degree in Primary and/or Elementary, Music Education, or Intermediate/Secondary Education from Memorial University of Newfoundland or another Education degree deemed appropriate by the Faculty of Education, AND have credit for one of Education 4240 or 4242 or the former Education 3220 or 3230 (or equivalent). Intermediate/Secondary graduates must also have credit for Education 4350; Music Education graduates must also have credit for one of Education 3312, 3543 or 4350.
- b. have successfully completed a professional internship in education or have equivalent teaching experience prior to admission.

### 1.20.2 Regulations for the Degree of Bachelor of Special Education

To be eligible for the Degree in Special Education, a student must have completed:

Either

1. the Memorial University of Newfoundland Bachelor of Education Degree Primary and/or Elementary, Music Education, or Intermediate/Secondary, or another Education degree deemed appropriate by the Faculty of Education, and
2. 36 credit hours as follows:
  - a. Required courses: Education 3600, 3610, 3620, 3630, 3650.
  - b. 21 credit hours selected from the elective offerings in Special Education.

or

1. the Memorial University of Newfoundland Bachelor of Education Degree Primary and/or Elementary, Music Education, or Intermediate/Secondary, or another Education degree deemed appropriate by the Faculty of Education, and
2. Education 365X plus Education 3600, 3610, 3620, 3630 and 9 credit hours from the elective courses in Special Education.

### 1.20.3 Waiver Guidelines - Education 3650

Students who have at least three years experience as a Special Education teacher, and who provide written reports from their principal or other appropriate authority, certifying the quality of their experience, to the Office of Undergraduate Student Services, may be granted waiver of Education 3650 upon approval by the Faculty of Education. Candidates approved for the waiver must substitute in its place one course (3 credit hours) in Special Education. Students may contact the Office of Undergraduate Student Services for additional information and application forms.

## 1.21 Bachelor of Education (Post-Secondary) and Diploma in Post-Secondary Education

### 1.21.1 Admission

1. To be considered for admission to the Post-Secondary Education Degree and Diploma programs, a student must meet, in addition to the general admission requirements of the University, special admission requirements as outlined below. Refer to the **Application Deadline Dates** table for application deadlines.
2. Occupational training as verified by one of:
  - a. a certificate of qualification as a journeyman for a designated trade;
  - b. a certificate or diploma from a technical or business school or college;
  - c. an appropriate degree from a university;
  - d. satisfactory completion of a program equivalent to a., b. or c. above.
3. At least one year of work experience or equivalent in the occupational area in which training was obtained. This experience must be subsequent to the completion of or concurrent with the occupational training program.

Note: *Training and experience will be assessed and verified by the Selections Committee for Post-Secondary Education.*

### 1.22 Regulations for the Degree of Bachelor of Education (Post-Secondary) as a First Degree

1. A candidate for the Bachelor of Education (Post-Secondary) Degree will be required to complete the equivalent of at least 120 credit hours approved by the Office of Undergraduate Student Services. The 120 credit hours must include:
  - a. Twenty-one credit hours as follows: Education 2710, 2720, 2730, 2801, 3280, 3801, 4700
  - b. Twenty-one credit hours to be chosen from: Education 2800, 2803, 2806, 3440, 3710, 3720, 3730, 4710, 4730, 4760-4780.
  - c. Six credit hours in English.
  - d. Thirty non-Education credit hours patterned to strengthen the area of teaching specialization and/or provide the development of depth in a related field of study as approved by the Office of Undergraduate Student Services. Education 4760-4780 may be used to satisfy non-Education specialization course credit hour electives if not already used to satisfy clause 1.b. above.
  - e. Twelve additional credit hours from any subject areas outside of Education. Six of these 12 credit hours may be chosen from courses listed in clause 1.b. above if not already used to satisfy the requirements of clause 1. b.
2. Advanced standing to a maximum of 30 credit hours may be awarded for students possessing at least a combined total of six years of training and work experience in the occupational area in which training was obtained. Students who because of a deficiency of work experience are not eligible to receive the maximum of 30 credit hours advanced standing will be required to obtain further work experience and/or to complete additional university courses, either or both of which must be approved by the Admissions Sub-Committee for Post-Secondary Education.
3. At least half the credit hours required under clauses 1. a. and b. above must be completed at this University.

### 1.23 Regulations for the Degree of Bachelor of Education (Post-Secondary) as a Second Degree

1. Candidates must also comply with **UNIVERSITY REGULATIONS - General Academic Regulations (Undergraduate) - Second Degree**.
2. To obtain the Bachelor of Education (Post-Secondary) as a second degree a candidate must complete at least 36 credit hours in Education. The 36 credit hours must include:

- a. Twenty-one credit hours as follows: Education 2710, 2720, 2730, 2801, 3280, 3801, 4700.
  - b. Fifteen credit hours of which 6 must be chosen from Education 2800, 2803, or 2806, and 9 must be chosen from 3440, 3710, 3720, 3730, 4710, 4730 or 4760-4780
3. At least 9 of the credit hours required under clause 2.a. must be completed at this University.

Notes: 1. *The requirement of Education 4700 may be waived by the Committee on Undergraduate Studies on the recommendation of the Office of Undergraduate Student Services. (Please refer to Student Teaching Guidelines).*

2. *Work competence and experience related to occupational area is required for acceptance to this program as outlined in the Admission Requirements but no advanced standing will be granted.*

## 2 Diploma Regulations

### 2.1 Regulations for the Diploma in Post-Secondary Education

1. A candidate for the Diploma in Post-Secondary Education will be required to complete 60 credit hours as outlined below:
  - a. Twenty-one credit hours as follows: Education 2710, 2720, 2730, 2801, 3280, 3801, 4700.
  - b. Nine credit hours to be chosen from: Education 2803, 3440, 3710, 3720, 3730, 4710, 4730, 4760-4780.
2. Advanced standing to a maximum of 30 credit hours may be awarded for students possessing at least a combined total of six years of training and work experience in the occupational area in which training was obtained. Students who because of a deficiency of work experience are not eligible to receive the maximum of 30 credit hours advanced standing will be required to obtain further work experience and/or to complete additional University courses, either or both of which must be approved by the Admissions Subcommittee for Post-Secondary Education.
3. At least 24 of the credit hours required under clause 1.a. and b. must be completed at this University.

Note: *The requirement of Education 4700 may be waived by the Committee on Undergraduate Studies on the recommendation of the Office of Undergraduate Student Services. (Please refer to Student Teaching Guidelines).*

### 2.2 Diploma in Adult Teacher Education

Refer to the **Application Deadline Dates** table for application deadlines.

1. To be admitted to the Diploma Program in Adult Teacher Education, an applicant shall:
  - a. be admitted to this University,
  - b. satisfy at least one of the following:
    - i. have been admitted to the Faculty of Education,
    - ii. have been approved by the Office of Undergraduate Student Services.
2. To be eligible for the Diploma in Adult Teacher Education, a student shall complete a total of 30 credit hours in Education courses as follows: 2710, 2800, 2801, 2803, 2806, 2730 or 3430, 3440, 4450, two of 3280, 3210, 3801.
3. A maximum of 12 credit hours referred to in Clause 2. above and which have already been counted toward a degree or diploma may also be counted toward the Diploma in Adult Teacher Education.
4. At least 21 of the credit hours required for the Diploma in Adult Teacher Education must be completed at this University.
5. From Clause 2. above a maximum of 9 credit hours, completed before admission to the program or the Faculty, may be used as credit toward the Diploma in Adult Teacher Education.
6. Students in the Adult Teacher Education diploma program must have their courses and course sequence approved by the Office of Undergraduate Student Services.
7. The requirement for a specific course, or courses, may in special circumstances, and upon individual request, be waived by the Committee on Undergraduate Studies. Such waivers shall not reduce the total number of credits required for the Diploma.

### 2.3 Regulations for the Diploma in Native and Northern Education in Labrador

1. The Diploma in Native and Northern Education in Labrador (T.E.P.L.) is a teacher education program in Labrador with Options in Classroom Teacher or Core Language Teacher.
2. Admission to the TEPL program requires a regular application for admission to Memorial University of Newfoundland and a special application for admission to the program. Application forms may be obtained from the Office of Native and Northern Teacher Education Programs, Faculty of Education, Memorial University of Newfoundland, St. John's, NL, A1B 3X8.
3. A candidate for admission to this program must normally be a speaker of either Innu-aimun or Inuktitut and meet the General Admission Requirements of the University as outlined in the Calendar.
4. To be eligible for the Diploma in Native and Northern Education, a candidate shall complete a total of 60 credit hours as follows:  
The following 30 credit hours are required for both **Option A - Classroom Teacher** and **Option B - Core Language Teacher**.  
Education 2022 or 2032, Education 2655, Education 3001, Education 3002, Education 3321, Education 4220 or 4230, English 1030, Linguistics 1030, Linguistics 1031, and Linguistics 2020 or 2030
5. For **Option A - Classroom Teacher** - the following 30 credit hours are compulsory in addition to those in 4. Above.
  - a. Education 2182, Education 2194, Education 2200, Education 2350, Education 3007, Education 3140, Education 3281, Education 3961, Education 4330, Sociology/Anthropology 2220
  - b. Professional Seminars. This is a non-credit component which is compulsory and will include seminars dealing with topics such as: Classroom Management, Organizational Skills, Healing, Computer Training and Resource Development.
6. For **Option B - Core Language Teacher** - the following 30 credit hours are compulsory in addition to those in 4. above.
  - a. Education 2035, Education 2036, Education 2037, Education 2038, Education 2039, Education 2041, Education 3007, Education 4221 or 4231, Education 4330, Linguistics 2021, or 2031
  - b. Professional Seminars. This is a non-credit component which is compulsory and will include seminars dealing with topics such as: Classroom Management, Organizational Skills, Healing, Computer Training, and Resource Development.

Note: *Courses designated for the TEPL program (designated by T) are intended for students registered in this program, but may be opened to other students upon permission of the Office of Undergraduate Student Services.*



### 3 Waiver of Regulations of the Faculty of Education

Regulations involving course prerequisites or co-requisites, departmental regulations, and faculty regulations may be waived where circumstances so warrant. The routing of requests for such waivers and the procedure for appealing unfavourable decisions are outlined in the **UNIVERSITY REGULATIONS - General Academic Regulations (Undergraduate)**.

### 4 Course Descriptions

In accordance with Senate's *Policy Regarding Inactive Courses*, course descriptions for courses which have not been offered in the previous three academic years and which are not scheduled to be offered in the current academic year have been removed from the following listing. For information about any of these inactive courses, please contact the Dean of the Faculty.

Students wishing waiver of Education 4700, post-sessional block or Education 401X should refer to **Waiver Guidelines of Education 4700, Post- Sessional Block, 401X** at the end of the **Course Descriptions** section.

Note: *All courses of the Faculty of Education are normally of a 3 credit hour value unless otherwise noted.*

#### Legend:

**PE:** Courses for students on the Primary/Elementary program

**IS:** Courses for students on the Intermediate/Secondary program

**ISI:** Courses for students on the Intermediate/Secondary Conjoint with the Diploma in Technology Education program

**T:** Courses for students on the T.E.P.L. Diploma program

**A:** Courses for students on the Diploma in Adult Teacher Education program

**ME:** Courses for students on the Music Education program

**PS:** Courses for students on the Post-Secondary Education programs

**SE:** Courses for students on the Special Education program

**NPE:** Courses for students on the Native and Northern Teacher Education program - Primary/Elementary route

**NS:** Courses for students on the Native and Northern Teacher Education program - Secondary route

**2022 The Teaching of Inuttut (T,NPE)** focuses on the preparation of materials and classroom strategies for the teaching of Inuttut in Primary and Elementary schools in Native communities. Attention will be given to linguistic difficulties encountered in schools by children whose first language is English.

**2023 Language and Culture in Education (NPE,NS)** is an overview of issues of language and culture in Native and Northern Education. Emphasis will be placed on examination and development of curricula and materials that recognize cultural diversity (especially Aboriginal cultures), foster the teaching and maintenance of Aboriginal languages, and support the work of Aboriginal language specialists in the classroom.

**2032 The Teaching of Montagnais (T,NPE)** - inactive course.

**2035 The Teaching of History and Culture of Labrador Inuit and Innu (T)** applies the principles of effective teaching to the learning of history and culture as it applies to the Labrador Inuit and Innu. Topics include specific teaching strategies and examination of the selection and use of learning resources for unit planning, development and evaluation.

**2036 The Teaching of Aboriginal Issues (T)** examines the teaching of specific current events relevant to Labrador Inuit and Innu. This will include issues in the areas of education/environment/society politics/self-government/industry and the economy. Class sessions will include a workshop mode of learning (public speaking, panel debates, use of Internet, research, survey and interviews).

**2037 Aboriginal Drama (T)** introduces drama as a way of transmitting culture and values and as a vehicle to communicate. Topics include an examination of the foundation, values and assumptions of drama (with emphasis on aboriginal forms) as an effective means of curriculum implementation in Innu-aimun and Inuktitut. An activity-centred approach will be emphasized.

**2038 Aboriginal Music and Art (T)** is a study of music and art in cultural transmission. The course will develop skills in reading and writing associated with Innu and Inuit cultures, and will emphasize activities for exploring the elements of music. Innu and Inuit art forms will be explored as well as art as decoration in Innu and Inuit society.

**2039 Cultural Camp (T)** is intended for aboriginal people to learn about ways of helping and healing that are traditional to their own culture and to learn ways of effectively incorporating those cultural aspects in the school curriculum of aboriginal schools. This course includes a one-week field trip to an isolated camp in coastal Labrador, where students and instructors will live according to traditional cultural practices under the guidance of community elders.

**2040 Basic Interpersonal Communication (PE)** is designed to help students develop confidence through self-expression, and acquire skills in

interpersonal relationships.

Note: *Credit may be obtained for only one of Education 2040 and Education 2041.*

**2041 Oral Communication (PE,T)** - inactive course.

**2050 Introduction to Drama Education (PE,ME)** is designed to introduce students to the use of drama as a learning medium. Students will be expected to participate in and to critically analyse practical drama sessions in order to gain an understanding of the fundamental nature of drama. Students will be engaged in a variety of teacher devised drama structures to introduce them to the theory and practice of selected pioneers in the field. Reference will be made to some aspects of child development such as play, cognition, affect and language and their relationship to learning through drama. It is expected that students will begin to formulate a rationale for the use of drama education in their future classroom practice.

Note: *Credit may not be obtained for both Education 2050 and the former Education 2030.*

**2182 An Introduction to the Teaching of Science in the Primary and Elementary Grades (T,ME,NPE)** is an introductory course illustrating fundamental processes and concepts of Science, and how these may be communicated to the elementary child. Content will be chosen which relates to the prevailing elementary school Science program. Typical concepts include measurement, energy in selected physical and biological systems, fundamental ecology, communities of living things, environmental change, the particulate nature of matter, and simple astronomy.

**2194 Physical Education in the Primary and Elementary Grades (PE,T,ME,NPE)** examines the curriculum organization in physical education for the Primary and Elementary grades; instructional material and teaching techniques for these grades; creative, aesthetic, and health-developing aspects of physical education.

Note: *Credit may not be obtained for both Education 2194 and the former Education 3070, or the former Education 2192 taken during the 1984-85 or 1985-86 academic years.*

**2200 Language Arts (PE,T,NPE,ME)** is an examination of the methods and materials used in the teaching of the language arts with special reference to the effect on the overall educational development of the child whose first language is not English.

**2202 Education in Native and Northern Communities - An Overview (PE,NPE,NS)** is a general introductory course for students planning to teach in a classroom where Innu and/or Inuit children are in attendance. Emphasis will be placed on creating an awareness of the religion, philosophy, cultural values and way of life of Native peoples; the legal and administrative processes concerning Native peoples from the past to the present; a historical perspective in Native education; and contemporary issues and trends in Native education. This course will provide the necessary foundation for the training of teachers who are sensitive to the influence of culture on the values, behaviour, needs and motivations of children.

**2222 Teaching English as a Second Language (PE,IS,NPE,ISI, NS)** includes selection and preparation of materials, and suitable classroom strategies for teaching English as a second language. Stress will be on the methods appropriate to cope with linguistic difficulties encountered in schools by children whose first language is not English.

**2245 Teaching Strategies in Culturally Integrated and Geographically Isolated Classrooms (PE)** - inactive course.

**2341 Directing Learning Experiences in Mathematics for Children in Primary and Lower Elementary Grades (PE)** - inactive course.

**2350 An Introduction to the Teaching of Mathematics in the Primary and Elementary Grades (T,NPE)** examines intuitive notions of a mathematical system with special emphasis on the concepts, basic mathematical properties and skills associated with the number systems of arithmetic. Additional topics will include relations, functions and basic concepts of Geometry related to the Mathematics programs of the elementary school.

**2361 The School and Community (NPE,NS)** is a study of the factors which constitute the educational setting in the Native community in comparison with other cultural settings. The school as an institution of cultural transmission and cultural change within the Native and Northern setting will be investigated. An examination of roles played by local individuals and groups in the education process will be addressed. Models to improve communication between school and the community will be studied.

**2420 Educational Supervision (PE,IS,ISI)** - inactive course.

**2430 Administration and Supervision in Native and Northern Education (NPE,NS)** is a study of the administrative structures involved in the education of children of Innu and Inuit backgrounds. The study examines the administrative structures of the past and present with particular reference to the problems which arise in the administration of schools in remote, isolated regions. Further, the study includes an overall examination of the alternative

Native processes of education relevant to the philosophy of Native people.

**2510 Elementary School Music Methods (ME)** is a course designed to introduce students to current philosophies and methodologies in the field of elementary classroom music. Students will examine materials currently available and be encouraged to develop and create their own. Emphasis will be on learning to evaluate materials as to suitability for musical concepts, class organizations, etc.

Lectures: Three hours per week.

Note: *This course may be used to replace Education 3180 in the requirements for the former degree regulations. Credit for both Education 3180 and 2510 cannot be obtained.*

**2520 Voice and Choral Methods (ME)** examines current pedagogical practices, procedures and materials for use with all levels of school choirs. In addition, this course will examine the anatomy and physiology of the changing voice as a basis for proper vocal development in the classroom setting.

Lectures: Three hours per week.

**2530 Primary School Music Methods (ME,PE)** examines current pedagogical practices, procedures and materials for use in the Primary School music program. The focus of this course will be on the Kodaly Method.

Prerequisite for Primary/Elementary program students: Completion of the focus area in Music.

Lectures: Three hours per week.

**2655 Recognizing and Protecting Children's Needs (T)** studies situations teachers encounter that foster and limit children's basic cognitive, social and emotional growth. Attention is paid to the nature and development of these needs and to situations (particularly those involving neglect and physical, sexual and psychological abuse) that impact on how needs are met. Attention will be paid to the recognition of both positive and abusive situations.

**2710 Course Organization and Development in Post-Secondary Education (A,PS)** examines the development of procedures for the identification of concepts in instructional units; analysis of tasks and identification of related competencies; development of resource units.

Note: *Credit may not be obtained for both Education 2710 and Education 2711.*

**2711 Course Organization and Development in Technology Education (ISI)** is an examination of the development, structure and organization of technology education curriculum locally and internationally; applications of design and problem solving instructional strategies; the management of resources in technology education laboratories; the development of resource units for teaching.

Note: *Credit may be obtained for only one of Education 2711 and Education 2710.*

**2720 Introduction to Post-Secondary Education (PS)** is a study of the back-ground of Post-Secondary Education and of its development and present forms in Newfoundland, other provinces of Canada, and other countries; an examination of current programs in Post-Secondary Education; the role of federal and provincial governments in Post-Secondary Education.

**2730 General Methods of Teaching in Post-Secondary Education (A,PS)** is an introduction to the methodology of teaching psychomotor and cognitive skills; selection of appropriate methods for individual and group instruction; organizing laboratory and shop instruction; principles of instructional management.

**2750 Introductory Design and Materials Processes (ISI)** examines theory and practice of teaching problem solving, design and materials processes. Topics and laboratory activities include production and computer assisted design.

**2751 Introductory Communications and Power Technology (ISI)** examines theory and practice of selected technical skills in communications, energy and power and their practical application in a technology education laboratory. Topics include micro-computer components, systems and operations; communication networks; basic electronics; and control systems.

**2800 Introduction to Adult Education (A,PS)** is a review of the history of the Adult Education movement. The rationale for the investment of public or private resources in the education or training of adults. An examination of current educational philosophies related to Adult Education.

**2801 The Adult as Learner (A,PS)** examines the implications for adult programs and instructional strategies of difference among adults in abilities, attitudes, interests, skills, social roles.

**2803 Educational Aspects of Adult Development (A,PS)** is an examination of the educational aspects of adult development from early adulthood through middle age to later maturity.

**2806 Sociology of Adult Education (A,PS)** explores the sociological context of adult learning. The interrelationship between particular social factors (e.g., age, sex, occupational structure) and the need for adult educational programs are studied. The potential effects of such programs on society are examined with reference to community development. Special emphasis is given to societal change as it relates to education as a way of life.

**2900 Introduction to Statistics in Education (PE,IS,ISI,ME)** is a laboratory

course which takes a practical case study approach to survey and quasi-experimental quantitative methods in education, together with supporting statistical concepts of probability, descriptive and inferential statistics sampling and sampling distributions, correlation and bivariate regression.

**3001 Supervised Practice Teaching in Native Schools I (T)** is a four month period as a teaching assistant involved in the preparation of teaching materials, teaching assigned lessons and participating in other activities related to the duties of a teacher. This session is to be under the direction of a co-operating teacher and a university professor.

**3002 Supervised Practice Teaching in Native Schools II (T)** is a four month continuation of the experiences provided in Education 3001 with added responsibilities, and increased development of competencies essential for teaching.

Prerequisite: Education 3001.

Prospective interns for the Fall semester should apply not later than February 15; prospective interns for the Winter semester should apply not later than September 30. Prospective interns for the Spring semester should apply not later than October 15. Applications received after these dates will be considered in terms of the number of spaces available.

**3007 Teaching Strategies in Native and Northern Schools (T,NPE,NS)** will examine a broad range of teaching strategies and instructional methods which may be used in classrooms. Students will be encouraged to incorporate elements of the Native and northern perspective in order to bring relevance to the province-wide curriculum. Particular emphasis will be placed upon how Native groups perceive education and the methods they view as appropriate.

Note: *Credit may not be obtained for Education 3007 in addition to any of Education 2230, 2240 or 4320.*

**3009 Drama Education in the Primary and Elementary Grades (PE,ME)** will focus on the practice and acquisition of the basic teacher skills and strategies that are particularly appropriate to the effective implementation of drama as a learning medium in the primary and elementary grades.

Prerequisite: Education 2050.

**3010 Drama Education and the Curriculum in the Primary and Elementary Grades (PE)** - inactive course.

**3030 Methods in Speech Improvement in the Schools (PE)** - inactive course.

**3040 The Assessment and Development of Children's Language Abilities (PE,SE)** will focus on techniques for assessing language abilities in primary and elementary grade children and will provide models for developing strategies in implementing language instruction appropriate to children's needs.

Prerequisite: Education 4350, 3543, or former 3540 or 3545.

Note: *This course is recommended for all candidates who anticipate working as resource-based special education teachers.*

**3050 The Teaching of French as a Second Language in the Primary and Elementary Grades (PE,ME)** is an introduction to the general principles of second-language teaching, to the curriculum materials currently prescribed for use in the schools, and to a consideration of teaching strategies and evaluation techniques associated with these materials.

Prerequisite: French 2101.

**3052 and 3053 Institute for Teachers of Core French in the Elementary Grades (PE)** - inactive course

**3080 Group and Audience Communication (PE)** - inactive course.

**3081 Communication Skills and Techniques in a Cross-Cultural Environment (PE)** - inactive course.

**3120 Foundations of Art Education (PE,ME,NS)** develops an understanding of art in relation to current theories of education and art education and to provide individual exploration of an experience in appropriate techniques. Curriculum will be examined with the focus on understanding how to provide favorable conditions and experiences for high quality individual development in visual expression.

Note: *Credit may not be obtained for both Education 3120 and the former Education 2020, the former Education 3110, or the former Education 3112.*

**3121 Education Through Art (PE,NS,ME)** - inactive course.

**3122 Fundamentals of Design for Teachers (PE)** - inactive course.

**3131 Music Education in the Primary/Elementary Grades (PE)** is designed to provide the prospective primary/elementary classroom teacher with the knowledge, skills and understandings necessary for presenting basic music concepts and skills to students and for using music as a means for teaching or enriching other areas of the curriculum. Course work will include study in the three facets of general classroom music: scholarship of the discipline, musicianship, and classroom methodology.

Notes: 1. *Credit may be obtained for only one of Education 3131 and Education 3130.*

2. *This course may not be used towards the Conjoint Degrees of Bachelor of Music and Bachelor of Music Education or the Bachelor of Music Education as a Second Degree.*

**3140 Creative Arts (T,NPE)** is a study of the relationship of music, art and drama to the teaching-learning process with emphasis on Native content. An

activity-centred approach will be emphasized.

**3150 Bilingualism: Linguistic, Cognitive and Educational Aspects (PE)** - inactive course.

**3210 An Introduction to Guidance Services (A,PE,IS,ISI)** is an introduction to guidance services in the modern school with specific emphasis on its history, purpose, basic concepts and principles, and services. Students are introduced to the nature of counselling, ways of developing effective interpersonal relationships within the school environment, and the role of the school counsellor and other educational personnel in the provision of guidance services.

**3211 Introduction to Career Education (PE,IS,ISI)** is an introduction to contemporary concepts and practices of career education and to theories of career development. Emphasis is on the practical application of theory and basic principles to the design and delivery of career education programs and to career counselling. Attention will be given to continuing career counselling and career development needs of individuals as well as to groups with special needs.

Note: *Credit may be obtained for only one of Education 3211 and Education 4906.*

**3255 Child Abuse and the School-Age Child (PE,IS,ISI)** will discuss the general issues of child abuse including definitions, detection, reporting, protection, prevention, and the educational implications of child abuse. A number of specific issues including provincial policies presently in force in Newfoundland and Labrador and elsewhere will be examined. The teacher's role in collaboration between officials in education, social work, health and justice agencies will be explored with a view to preventing abuse and modifying the circumstances of abused children.

**3273 Science in the Primary/Elementary Grades (PE)** is a practical course designed to develop approaches to Science teaching based on student investigation of scientific phenomena. Examples are drawn from both provincial and other major curricula.

Note: *Credit may be obtained for only one of Education 3273, 2180, 3270 or 3275.*

**3276 The Teaching of Science in the Junior High School (PE)** - inactive course.

**3277 The Teaching of Environmental Science (PE)** - inactive course.

**3280 Educational Assessment (A,PS)** is a study of the broad spectrum of educational assessment focusing specifically on the development of objectives, the construction and use of formal teacher-made tests, the use of informal assessment techniques, the interpretation and application of assessment data, continuous evaluation, criterion-referenced measurement, and emerging trends in assessment.

Note: *Credit may be obtained for only one of Education 3280 and Education 4912.*

**3281 Tests and Measurements (T,NPE,NS)** examines basic concepts of evaluation involving teacher-made and standardized tests, with particular reference to validity and reliability in cross-cultural situations.

Note: *Credit may be obtained for only one of Education 3281 or 4912.*

**3290 Identifying Learner Diversity within a Context of Culture (PE,IS,ISI)** examines basic concepts of measurement and evaluation applied to the school situation; a general consideration of the nature and appraisal of scholastic aptitude, special aptitude, interest and personality. Sample tests in each of these areas will be examined. The use of non-test appraisal devices and pupil record systems will be considered.

**3312 Language Arts in the Primary/Elementary School I (PE)** provides students with a holistic view of the learning and teaching of language arts (i.e., the receptive language abilities of viewing, listening and reading, and the expressive language abilities of speaking and writing). This course will help students develop a theoretical perspective on two major aspects of language, that being "knowledge of language" (i.e., knowledge of the structures of language) and "knowledge about language" (i.e., knowledge about attitudes and perceptions towards language and the various purposes of language). This course will extend students' understanding of the importance of the home/community influences upon emergent and developmental literacy and language development.

Note: *Credit may be obtained for only one of Education 3312, 2210, 2220, 3305 or 3315.*

**3321 Native Literature (T,NPE)** is an examination of Native literature with special emphasis on writings of Native peoples for Native children. Literature which presents the Native point of view will be examined in the light of historical and current developments in Native and northern conditions.

**3322 Children's Literature in the Primary/Elementary School (PE)** focuses on the personal and educational values for using children's literature in the classroom, examines the literary genres appropriate for primary/elementary children and explores meaningful literacy extensions to develop children's literacy strategies and skills. In addition, the course examines guidelines for evaluating children's literature for literacy and aesthetic qualities. Instructional strategies to integrate children's literature across the curriculum are explored.

Note: *Credit may be obtained for only one of Education 3322, 2060, 2065, 3310 or 3320.*

**3380 An Introduction to the School Resource Centre - Organization,**

**Administration and Services (PE)** - inactive course.

**3390 Selection of Materials for the School Resource Centre (PE)** - inactive course.

**3410 Comparative Educational Administration (PE)** - inactive course.

**3420 School Law for Teachers (PE)** - inactive course.

**3430 General Methods of Instruction of Adults (A)** is a study of the various processes of Adult Education: discussion groups, case studies, role playing, individual and group discovery, demonstrations, simulation exercises, action research, report writing and lectures.

**3440 Organization and Administration of Programs in Adult Education (A,PS)** examines alternative provincial or regional methods of organization for the provision of Adult Education. The statutory framework within which Adult Education functions.

**3460 Cataloguing and Classification of Instructional Materials (PE)** - inactive course.

**3470 Information Services of a School Resource Centre (PE)** - inactive course.

**3484 Computers and Learning Resources for Primary/Elementary Teachers (PE)** focuses on the integration of computer software and other learning resources into primary/elementary school teaching. Laboratory components will be scheduled so that students may learn how to use and implement communications, applications and curricular software.

Note: *Credit may be obtained for only one of Education 3484, 3480, 3801, 4480, 4905.*

**3515 Current Approaches to Reading in the Primary and Elementary Grades (PE)** includes a further examination of approaches to the teaching of reading in the primary and elementary grades.

Prerequisite: Education 3543, or former 3540 or 3545.

Note: *Credit may be obtained for only one of Education 3515 or the former Education 3510 or 3520.*

**3530, 3531 and 3532 Reading Institute Courses (PE)** - inactive course.

**3542 Reading in the Primary and Elementary Grades (NPE)** is concerned with the teaching of reading in the primary and elementary grades. Special attention is given to the learning needs of children whose first language is not English. Emphasis is placed upon understanding the nature of the reading process and the current practices used in classroom reading instruction for kindergarten through grade six.

Note: *Credit for this course is restricted to students enrolled in the Bachelor of Education (Native and Northern) Degree program. Credit may be obtained for only 1 of 3542, the former Education 2110, the former Education 2120, Education 3540, Education 3543 and Education 3545.*

**3543 Language Arts in the Primary/Elementary School II (PE)** provides students with a social-psychological perspective on children's learning to read, reading and reading to learn. Students will explore current and traditional models of the reading process and the importance of home/school/community contexts for fostering literacy learning. Students will apply instructional strategies for children's learning of story, book and print concepts, word identification, fluency, vocabulary development and comprehension for a variety of texts.

Prerequisite: Education 3312.

Note: *Credit may be obtained for only one of Education 3543, 2110, 2120, 3540, 3542 or 3545.*

**3560 Comparative Education (PE)** - inactive course.

**3563 The Sociology of Teaching (PE)** - inactive course.

**3565 Gender and Schooling (PE,IS,ISI)** is an introduction to the study of gender and education. It includes a historical overview of the link between gender and schooling as well as an examination of contemporary theoretical perspectives and research relating to the role of the school in gender development in general and gender inequality in particular. Implications for educational policy and practices will also be explored.

**3570 History of North American Education (PE,IS,ISI)** examines the development of education in North America; the role of the church in early Canadian education; education after Canadian Confederation; the growth of the Newfoundland denominational system of education.

**3571 The History of Education in Newfoundland Since 1800 (PE,IS,ISI)** is a survey of the main trends in the development of the educational system; the social, religious and demographic factors which have affected educational progress; the place of education in the cultural development of Newfoundland.

**3573 History of Native and Northern Education in Canada (PE,NPE,NS)** - inactive course.

**3580 Education and Culture (PE)** - inactive course.

**3582 Education of Minority Groups (PE)** - inactive course.

**3585 Multiculturalism and Education (PE,IS,ISI)** - inactive course.

**3590 Moral Education (PE)** is an exploratory course which attempts to

foster understanding of the nature and scope of moral education by (a) focusing on issues and problems affecting morality and on their bearing on moral education, and by (b) offering an overview of contemporary moral development theories and research, educational strategies, and relevant curricular materials.

**3600 Academic and Behavioural Evaluation (SE)** applies the theories of test development in establishing a competent understanding of the utilization of diagnostic and prescriptive instruments as well as teacher-made tests as they apply to the area of exceptional children.

**3610 Nature and Characteristics of Mental Retardation (SE)** aims to provide an understanding of the nature and characteristics of mental retardation and the psycho-social implications of this area of exceptionality.

**3618 Nature of the Primary/Elementary School Child - Development (ME,PE)** is intended to provide students with an awareness and understanding of the origins of many aspects of child behaviour and competence. While focussing on the development and nature of the "normal" child, where appropriate, contrasts and comparisons will be made between the development of "normal" and "exceptional" individuals.  
Note: *Credit may be obtained for only one of Education 3618, 2610 or the former 3240.*

**3619 Nature of Primary/Elementary School Child - Learning and Cognition (ME,PE)** provides an introduction to human learning, motivation and cognition and to the related concepts and theories underlying children's classroom learning and behaviour. Focus will be on typical development with some attention to atypical (exceptionality) functioning in these areas. The course will familiarize students with the concepts and vocabulary used to describe classroom learning and with explanations and justifications for many educational and instructional activities and practices. Particular attention will be paid to application of this knowledge to instruction and classroom management and to the facilitation of learning.  
Prerequisite: Education 3618.

Note: *Credit may be obtained for only one of Education 3619, 3616, or 3615.*

**3620 Nature and Characteristics of Emotional/Behavioural Disorders (PE,SE,ME)** includes an examination of procedures for the early identification of children with behavioural disabilities and major systems of classification of behaviour problems. It will also include an analysis of: aberrant adjustment mechanisms, deviant development and specified behaviour problems with implication for therapeutic education.  
Prerequisite: Education 4242, 4240, or the former 3220 or 3230.

**3630 Nature and Characteristics of Learning Disabilities (SE)** is a survey of characteristics as well as problems of identification, and the evaluation of children who are potentially average or above in intelligence, but who are failing to learn in the school environment; and who are manifesting such behaviours as lack of motor development, auditory and visual perceptual handicaps, language deficiencies and behaviour control disorders.  
Note: *Students who have completed the former Education 3231 may not take Education 3630 for credit.*

**3640 Current Issues in Special Education (PE,SE)** consists of a study of special and selected problems related to the teaching of special education with particular emphasis placed on special education within the Province of Newfoundland and Labrador.  
Prerequisite: Education 4242, 4240, or the former 3220 or 3230.

**365X Extended Harlow Practicum in Special Education (SE)** (equivalent to 15 credit hours in Special Education) is a full semester school placement in a special educational environment at Harlow, England. It consists of an extensive supervised teaching component with opportunities for student analysis of and reflections on their field experiences. There are also seminars, field visits and guest lecturers intended to develop a cross-cultural perspective on exceptionality and special education in Britain and Canada.  
Prerequisite: Completion of at least 18 credit hours in the Degree Program in Special Education including Education 3600. Students must also apply to be selected for this course.

**3650 Practicum in Special Education (SE)** encompasses practicum for Special Education students in any of the areas of exceptionality with opportunity for supervised participation in public school, private school, or institutionalized Special Education programs. The main emphasis will be on supervised diagnosis and remediation on a one-to-one basis between the practicum student and the exceptional child. Case conferences and seminars will be held regularly throughout the term.  
Prerequisite: Completion of 18 Special Education credit hours including Education 3600.

**3660 A Study of the Gifted Child (PE,ME,SE)** is an examination of the nature and characteristics of gifted children, with emphasis upon methods of identifying gifted children, implications of giftedness for learning and instruction and reviews of several educational programs for the gifted.

**3680 Behaviour Therapy for Children and Adolescents in Educational Settings (SE)** will examine: methods of behavioural assessment; specific cognitive, respondent and operant behaviour therapy techniques. Behaviour problems and change programs will be considered within an ecological context and the role of non-professionals as therapeutic agents will be studied.

**3690 Collaborative Practice (SE)** examines the theoretical and practical aspects of collaborative practice within an interagency model of case

planning for students with diverse learning needs. Emphasis is on exploring issues of power/empowerment, consultation, communication, conflict resolution/problem-solving, advocacy and collaboration. Perspectives of parents and families, educators, and community resource professionals will be explored. The course strives to create a family-focused approach to effective planning in contemporary schools.

**3710 Group Instruction in Post-Secondary Education (PS)** is an in-depth study of various methods of group instruction; planning and presenting demonstration teaching units; practice in techniques of group instruction.  
Prerequisites: Education 2710 and 2730.

**3720 Individualized Instruction in Post-Secondary Education (PS)** is a study of the various systems of individualized instruction; the theoretical basis for individualizing courses, individual differences, organizing individualized courses, selection and development of materials; management of individual student progress.  
Prerequisites: Education 2710 and 2730.

**3730 Curriculum and Instructional Development in Post-Secondary Education (PS)** examines the social, cultural, philosophical, and economic forces influencing changes in Post-Secondary curriculum and instructional methods. Study of current Post-Secondary Education curriculum designs, problems and trends; methods of gathering curriculum information; procedures for revising and evaluating a curriculum.  
Prerequisites: Education 2710 and 2730.

**3750 Intermediate Design and Materials Processing Technology (ISI)** is a continuation of theory and practice of teaching technical skills and design processes developed in Education 2750. Topics elaborate on computer assisted design and problem solving with application of advanced construction techniques.

**3751 Intermediate Communications and Power Technology (ISI)** is a continuation of theory and practice of technical skills in communications, power and energy developed in Education 2751. Topics include energy sources, control systems, graphic communication processes and electronic communications.

**3755 Teaching Technology Education in the Primary/Elementary Classroom (PE)** - inactive course.

**3801 Educational Media I (A,PS)** introduces students to audio visual communications with emphasis on equipment operation and basic local production of instructional materials; and the application of computers to education. A two-hour laboratory period will be arranged after the first class period.  
Note: *Credit may be obtained for only one of Education 3480, Education 3484, Education 3801, Education 4480 and Education 4905.*

**3802 Educational Media II (PE)** - inactive course

**3807 Learning Resources, Curriculum and Instruction (PE, ME)** - inactive course

**3815 Practicum in Kodaly I (PE)** - inactive course

**3915 Practicum in Kodaly II (PE)** - inactive course

**3920 Instrumental Teaching Methods (ME)** examines current pedagogical practices, procedures and materials for teaching brass, woodwinds, and percussion in band and orchestral school settings.  
Lectures: Three hours per week plus laboratory.  
Note: *Includes a laboratory section (MUN Lab Band and Orchestra) designed to provide practical teaching experience and methodology in both band and orchestral settings.*

**3925 Intermediate/Secondary School Music Methods (ME)** examines current pedagogical practices, procedures and materials for teaching Music in the intermediate/secondary schools.  
Lectures: Three hours per week.

**3940 Mathematics in Primary and Elementary Grades (PE, ME)** is a general overview of aspects of teaching Mathematics in the primary and elementary grades. Theories of child development as they relate to Mathematics teaching, characteristics of Mathematics topics in primary and elementary grades, and the implications for teaching will be the major topics to be discussed in this course.  
Note: *Credit may not be obtained for both Education 3940 and the former Education 2340, the former Education 2310, or the former Education 2320.*

**3941 Diagnosing and Directing Learning in Primary and Elementary Mathematics (PE,T,SE)** is a study of aspects of diagnosis and remediation in primary and elementary Mathematics, and of the basis for constructing and applying diagnostic techniques. An examination, development, and application of a variety of manipulative aids to be used in the teaching of Mathematics in the primary and elementary grades.  
Prerequisite: Education 3940.

**3942 Mathematics Teaching in Small Primary and Elementary Schools (PE)** - inactive course

**3943 Curricular Uses of Computers (PE,IS,NS)** - inactive course.

**3945 and 3946 Institute in Teaching of Junior High School Mathematics Courses (PE)** will focus on the nature of junior high Mathematics instruction

and how it should differ from elementary and high school instruction. Emphasis will be placed on the transition between informal and formal approaches to the teaching of junior high Mathematics. The Van Hiel levels and their implications for instruction in geometry will be discussed.

Activities appropriate to the teaching of junior high Mathematics will be developed and demonstrated. A particular focus in this component of the Institute will be on activities appropriate to the new program and how they can be integrated into the junior high Mathematics curriculum.

Prerequisite: Education 3940 (or equivalent) or Education 4161 (or equivalent) or permission of the instructor.

**3951 Curriculum, Instruction, and Assessment in the Primary/Elementary School I (PE)** is designed to engage students in an introduction to curriculum, instruction, and assessment in the primary/elementary school through active participation in problem solving. Students will be introduced to the different ways that primary/elementary school children view and make sense of their world (i.e., the linguistic, mathematical, scientific, and artistic). Working through such a framework, students will be introduced to instructional strategies and planning, formative and summative assessment, and issues inherent in the management of the primary/elementary classroom, as they create multi-disciplinary, thematic, resource-based units.

**3952 Curriculum, Instruction, and Assessment in the Primary/Elementary School II (PE)** is designed to engage students in a deeper exploration of issues in curriculum, instruction, and assessment in the primary/elementary school through active participation in problem solving. Students will be introduced to the different ways that primary/elementary school children view and make sense of their world. Working through such a framework, students will be introduced to instructional strategies and planning, formative and summative assessment, and issues inherent in the management of the primary/elementary classroom, as they create multi-disciplinary, thematic, resource-based units.

Prerequisite: Education 3951.

**3961 Social Studies in Native and Northern Schools (T,NPE)** will include an examination of teacher planning, appropriate teaching strategies for and the evaluation of pupil learning in the social studies within those contexts, in addition to exploring the nature and purposes of social studies education in Native and northern schools.

Note: *Credit may not be obtained for Education 3961 in addition to Education 2150 or 3960.*

**3962 Social Studies in the Primary/Elementary School (PE)** is an introduction to the social studies program at the primary/elementary school level. Topics to be explored include the nature and purposes of the social studies curricula, approaches to teaching and learning in this curricula area, selecting and utilizing learning resources, and conducting assessment in the social studies.

Note: *Credit may be obtained for only one of Education 3962, 2160 or 3960.*

**4005 Effective Teaching (IS,ISI)** is an introduction to the principles and practices of effective teaching. Topics include decision making, classroom management, planning, general models of teaching such as direct teaching and inquiry-based instruction, and specific teaching strategies such as questioning, grouping, and discussion techniques. Provision will be made for students to engage in simulated teaching.

**401X Undergraduate Teaching Internship (PE)** (equivalent to 15 credit hours in Education) is designed as an extended practicum affording students an opportunity to integrate theory and practice in a working situation, the internship consists of intensive classroom experience extending over one semester during the final stage of the program. During this period, students will be provided with educational experiences in which the interrelationships among the components of the university program are brought into focus through the teaching exercise.

The internship is intended to help students develop their individual style of teaching, to enable students to recognize the scope and complexity of a classroom teacher's role and responsibility, and to provide opportunities for the study of children as individuals and in groups, both in the classroom and other school settings.

Beginning with orientation activities early in the semester, students' responsibilities will include observing and analyzing teaching-learning activities, preparing and presenting student-learning activities, assessing both personal and class progress, and participating in discussions with co-operating teachers and faculty advisers. Throughout the internship semester, students will be required to participate in seminars related to in-school work.

Prerequisite: Successful completion of the professional year. Students doing a Focus Area in French must have completed the courses in French required under the regulations for this focus area, and Education 3050.

Notes: 1. *Credit may be obtained for only one of Education 401X, the former Education 302X and Education 403X.*

2. *Students completing Education 401X are advised that they may not be placed in their first district of choice and may be assigned to another Provincial school district.*

3. *Attendance in the Internship is mandatory. With respect to holidays, interns follow the schedule of the school and not that of the University.*

**4020 Issues and Trends in Native Education (NPE,NS)** is a seminar course dealing with research, current problems and issues associated with Native Education within a Canadian, and in particular, a Newfoundland and Labrador context.

**403X Internship in Music Education (ME)** (equivalent to 15 credit hours in

Education) is a one-semester internship in one or more schools to permit student teaching experiences in choral, classroom and instrumental teaching situations in the primary, elementary and intermediate/secondary schools.

Notes: 1. *Students completing Education 403X are advised that they may not be placed in their first district of choice and may be assigned to another Provincial school district.*

2. *Attendance in the Internship is mandatory. With respect to holidays, interns follow the schedule of the school and not that of the University.*

**404X Internship in Native and Northern Education (NPE,NS)** (equivalent to 15 credit hours in Education) is a one-semester internship in a school setting that will enable students to become directly involved in the teaching/learning process through observation and practice. Activities during the semester will involve seminars to assist students in the assessment of teaching methodologies most appropriate for the curriculum in Native schools. Student placement will be in a school setting depending upon the program route which students have followed.

Prerequisite: see Bachelor of Education (Native and Northern) Degree Regulations.

Note: *Attendance in the Internship is mandatory. With respect to holidays, interns follow the schedule of the school and not that of the University.*

**405X Internship in the Intermediate/Secondary School (IS,ISI)** (equivalent to 15 credit hours in Education) is an extended practicum which is school based. The purpose of the Internship is to provide opportunities for interns to apply theories of teaching and learning in classroom settings, to develop effective teaching practices and to become reflective practitioners. The responsibility for the professional development and evaluation of the intern is shared between a classroom teacher and a University Supervisor.

Notes: 1. *Students wishing to complete an internship in French Immersion must complete Education 4154 and obtain the permission of the Office of Undergraduate Student Services. Normally, French Immersion interns have the equivalent of a major in French and a minimum of two semesters in a French milieu.*

2. *Students completing Education 405X are advised that they may not be placed in their first district of choice and may be assigned to another Provincial school district.*

3. *Students completing the Bachelor of Education (Intermediate/Secondary) Conjoint with the Diploma in Technology Education will be placed for part of the internship in a Technology Education classroom setting.*

4. *Attendance in the Internship is mandatory. With respect to holidays, interns follow the schedule of the school and not that of the University.*

**4120 The Teaching of Art in the Intermediate and Secondary School (IS,ISI,ME)** examines current philosophies and methodologies in teaching art. Topics include curriculum implementation, organization and management, evaluation, safety, and advocacy.

**4121 Teaching Theatre Arts in the Intermediate and Secondary School (IS,ISI,ME)** examines the place of Theatre Arts in the intermediate and secondary school; the relationship between Theatre Arts and Drama in Education; and the most appropriate methods for the effective teaching of Theatre Arts.

**4142 The Teaching of English Language and Literature in the Intermediate and Secondary School I (IS,ISI,ME)** applies the principles of effective teaching to the teaching and learning of English language and literature. Topics that will be considered include the nature and structure of language and literature programs, text analysis, the writing of non-fiction prose, media literacy, and oracy.

**4144 Advanced English Teaching Methodology (IS,ISI)** builds upon the experiences gained in the internship, this course examines the reading and writing workshop approach to the study of English language and literature.

Prerequisite: Education 4142 (or permission of the Office of Undergraduate Student Services).

**4151 Advanced French Methodology (IS,ISI,NS)** is an in-depth analysis of the nature and purpose of the French program. Topics include a brief overview of the history of French teaching methodologies, an introduction to the research literature, an evaluation of techniques, and a consideration of issues facing the teaching of French.

Prerequisite: Education 4154 (or permission of the Office of Undergraduate Student Services).

**4154 The Teaching of French in the Intermediate and Secondary School (IS, ISI, ME)** gives an introduction to the nature and purpose of French programs at the Intermediate and Secondary school levels. Topics include: an overview of the characteristics and aims of French programs including Core French and French Immersion. The course will explore basic principles, techniques, strategies, and practices relating to teaching French as a second language, as well as characteristics of second-language lesson planning.

**4155 Introduction to Teaching in French Immersion in the Primary and Elementary Grades (PE,ME)** is a brief overview of the development of French Immersion programs; aims and objectives of French Immersion; evaluation of the extent to which objectives and materials can reflect those of the regular English classroom; analysis of differences between teaching in the French Immersion classroom and the core French, the French mother tongue, and the regular English classrooms; general teaching strategies

appropriate to the level of French language development in the immersion setting.

Note: *This course will be conducted in French.*

**4161 The Teaching of Mathematics in the Intermediate and Secondary School (IS,ISI,ME,NS)** applies the principles of effective teaching to the teaching and learning of mathematics. Topics include the purpose of mathematics, theories of learning mathematics, and lesson planning and evaluation.

**4163 Advanced Mathematics Methodology (IS,ISI,NS)** builds upon the principles of effective teaching and the teaching of mathematics to address specific issues related to the teaching and learning of mathematics in the Intermediate and Secondary school.

Prerequisite: Education 4161 (or permission of the Office of Undergraduate Student Services).

Note: *Credit may be obtained for only one of Education 4163 and the former Education 4160.*

**4172 Advanced Science Education Methodology (IS,ISI)** builds upon the principles of effective teaching and subject-specific methods courses, examines the experiences gained in the internship, and introduces significant and advanced ideas related to science teaching.

Prerequisite: Education 4174 or 4175 (or permission of the Office of Undergraduate Student Services).

**4174 The Teaching of Intermediate/Secondary School Science (IS,ISI)** is a laboratory course which will examine curricular and teaching issues generic to science teaching in intermediate and secondary schools. Choice of teaching examples will be made in order to stress situations most likely to be encountered by beginning science teachers. Differentiation of assignments will be based on the science discipline background of individual students. Students will carry out laboratory work in intermediate science and in a teachable area in which they were admitted.

Note: *Credit may not be obtained for this course and any of Education 4170, 4171, 4270, or 4271.*

**4175 Foundations of Intermediate/Secondary Science Education (IS)** is a laboratory course which will examine major positions on the growth of knowledge in science, the history of ideas in science, scientific misconceptions, and the application of these ideas to science teaching will be the focus of this course. Students will carry out laboratory work in a second teachable area in which they were admitted.

Co-requisite: Education 4174

**4180 The Teaching of Social Studies in the Intermediate and Secondary School I (IS,ISI,ME,NS)** applies the principles of effective teaching to the teaching and learning of Social Studies. Topics include the nature and purpose of social studies education, specific teaching strategies, the examination of the selection and use of learning resources for the Social Studies, unit planning, development, and evaluation.

**4181 The Teaching of Social Studies in the Intermediate and Secondary School II (IS,ME,NS)** examines the teaching of specific disciplines in Social Studies. Topics include the nature of the particular discipline, intermediate and secondary school courses in the discipline, and teaching strategies appropriate to the discipline.

Co-requisite: Education 4180

**4182 Advanced Social Studies Methodology (IS,ISI)** analyzes students' experiences in the internship, examines recent research in the teaching of social studies, considers alternative approaches to the teaching and learning of social studies, and explores current issues in the field.

Prerequisite: Education 4180 or 4181 (or permission of the Office of Undergraduate Student Services).

**4190 The Teaching of Physical Education in the Intermediate and Secondary School (IS,ISI,ME)** is a laboratory course that applies the principles of effective teaching to the teaching and learning of physical education. Topics include the nature and purpose of physical education, an examination of the physical education curriculum, an analysis of quality daily physical education, approaches to teaching physical education, and evaluation of progress in physical education.

Laboratory: Two hours per week supervised practice teaching on-campus and in a school setting.

**4203 The Teaching of Religious Education in the Intermediate and Secondary School (IS,ME)** applies the principles of effective teaching to the teaching and learning of Religious Education. Topics include formulating objectives, examining theories of faith and moral development, selecting and using resources, and evaluating learning.

**4204 Advanced Religious Education Methodology (IS)** builds upon the principles of effective teaching and religious education to address further the major historical issues and contemporary theories. Topics include a reflection on the internship experience, an examination of the theories of religious education, and an analysis of the foundations of religious education.

Prerequisite: Education 4203 (or permission of the Office of Undergraduate Student Services).

**4205 Religious Education in Primary and Elementary Grades (PE,ME)** is an introductory study of aims and objectives, subject matter, curriculum materials, teaching methods, learning experiences, and evaluation for Religious Education courses.

Note: *Credit may not be obtained for both Education 4205 and the former*

*Education 2080.*

**4220 The Teaching of Inuttut I (T,NPE,NS)** explores a variety of teaching techniques and materials developed to assist in the teaching of Inuttut in Native schools. Problems associated with second-language teaching will be explored.

Prerequisite: At least 9 credit hours in Inuttut.

**4221 The Teaching of Inuttut II (T,NPE,NS)** is a continued exploration of teaching techniques and material development for the teaching of Inuttut with emphasis on linguistic difficulties encountered in Native schools by children whose first language is English.

Prerequisite: Education 4220.

**4230 The Teaching of Innu-aimun I (T,NPE,NS)** explores a variety of teaching techniques and materials developed to assist in the teaching of Innu-aimun in Native Schools.

Prerequisite: At least 9 credit hours in Innu-aimun.

**4231 The Teaching of Innu-aimun II (T,NPE,NS)** explores a variety of teaching techniques and material development for the teaching of Innu-aimun. Linguistic difficulties encountered by students whose first language is not Innu-aimun.

Prerequisite: Education 4230.

**4240 An Introduction to the Exceptional Learner (IS,ISI,PE)** is an introduction to the nature of exceptionality in the student. Topics include an examination of special needs resulting from exceptionality, approaches to meeting the special needs, issues of exceptionality, and a consideration of selected categories of exceptionality.

Note: *Credit may be obtained for only one of Education 4240, the former Education 3220 and Education 4902.*

**4242 Identification and Remediation of Learning Difficulties (IS,ISI,PE)** examines the identification processes and remediation techniques appropriate for dealing with student learning difficulties. Topics include identification of learning difficulties, the process of program planning, and the application of teaching and learning strategies to specific subject areas.

**4250 and 4251 Institute for Teaching French in Immersion Programmes Courses (PE)** - inactive course.

**4252 and 4253 Institute in the Teaching of Social Studies in French Immersion Courses (PE)** - inactive course.

**4254 and 4255 Institute in the Teaching of Mathematics in French Immersion Courses (PE)** - inactive course.

**4260 The Nature of Adolescence (IS,ISI)** examines the nature of adolescence. Topics include an introduction to development theories, an examination of the considerations for teaching and learning, and an analysis of the issues and concerns of the classroom teacher.

**4261 Human Learning Theories and Their Application to the Instructional Process (IS,ISI)** - inactive course

**4275 Environmental Education Across the Curriculum (IS,ISI)** examines various international and Canadian initiatives, models, curricula, and programs in environmental education and explores effective methods of developing environmental awareness through the various content areas of elementary, intermediate and secondary education.

**4330 Curriculum and Instruction in Native and Northern Schools I (T,NPE,NS)** reviews the principles of and techniques for curriculum development. Adaptation or reformulation of these will be made in the light of the needs and desires of Native peoples. Critical analysis will be made of curriculum resources presently in use. Instructional materials will be prepared and produced with emphasis on printed materials relevant to the experiential background of the Indian and Inuit child.

**4331 Curriculum and Instruction in Native and Northern Schools II (PE,NPE,NS)** is an in-depth examination of innovations in curriculum and instruction in Native communities within Canada. Emphasis will be placed on projects in curriculum planning and the development of instructional material, to be conducted in conjunction with school personnel already in the field. This course would serve as a valuable resource to school systems involved in curriculum planning and instructional development.

**4340 Literature for Young Adults (IS,ISI)** is designed to explore literature for young adults and its integration into the content areas. Topics include an examination of the nature of literature for young adults, the literary genres, research on the reading interests of young adults, issues treated in young adult literature, and an historical overview of available young adult literature.

**4350 Reading in the Content Areas (IS,ISI)** examines the nature of reading in subject-specific areas such as history, biology, and mathematics. Topics include the role of the teacher in the teaching of content in different areas, evaluating vocabulary, grammar, usage and text structure for instruction, and analyzing the variety of strategies for reading, writing and studying.

**4352 Language Across the Curriculum (IS,ISI)** - inactive course

**4354 Writing in the Intermediate and Secondary School (IS,ISI)** analyzes the relationship between writing and learning. Topics include an examination of the variety of approaches to the teaching of writing, the role of the teacher in the teaching of writing, the composing process, and the evaluation of

writing.

**4356 Learning Through Drama (IS,ISI)** introduces drama as a valuable teaching and learning strategy. Topics include an examination of the foundations, values, and assumptions of drama as an effective means of curriculum implementation in subjects such as English, Social Studies, and Science.

**4361 Teaching and the Contemporary Classroom (IS,ISI)** is an introduction to the institutional and social context of teaching. Topics include the role of school in society, the organization and administration of schools, the dynamics of classroom culture, and school observation.

**4362 Sociological Perspectives on Teaching and Learning (PE,ME)** is an examination of such social issues in education as poverty, child abuse, gender, ethnicity, and changes in the society and their implications for the nature and process of schooling. A study of social dimensions of education, including the content of education and the organization of teaching and learning. An analysis of students' experiences in the internship with regard to the above and other aspects of education the students might identify.

Prerequisite: Completion of Professional Year.

Note: *Credit may be obtained for only one of Education 4362 and 4360.*

**4370 History of Education (PE,ME)** - inactive course

**4381 Perspectives on Schooling (IS,ISI)** examines educational theory and practice within the context of sociological, historical, and philosophical perspectives on schooling. Topics include the purpose of education, the formation of knowledge, and an analysis of issues such as equality of opportunity, and educational reform and change.

**4382 Critical Thinking and Knowledge in Education (IS,ISI)** examines various conceptions of the nature of critical thinking and its role in the acquisition, justification, and production of disciplinary knowledge. Topics include the nature of critical thinking, the uses of language in reasoning and communication, criteria and principles of reasoning within the various disciplines, methods and strategies of problem-solving, negotiation, and decision-making, and the teaching and assessment of critical thinking.

**4383 Philosophy of Teaching and Learning (PE,ME)** examines a number of central philosophical concepts, assumptions and issues involved in the pursuit of teaching and learning in the schools. The aim of the course is to provide students with an understanding of the distinctive character of philosophical analysis as a reflective and critical practice that intends to promote professional excellence and personal well-being.

Prerequisite: Completion of Professional Year

Note: *Credit may be obtained for only one of Education 4383 and 4380.*

**4420 Legal and Moral Issues in Education (IS,ISI)** examines educational law and sources of conventional morality for the purpose of clarifying individual stances on legal and moral issues. Topics include the nature and theoretical bases of law and morality in education, the legal foundations of the Canadian education system, the legal and moral rights and responsibilities of teachers and students, and teacher liability.

**4425 Introduction to Educational Administration (PE,IS,ISI)** is an examination of the roles of various levels of government in Education; theories of administration; management as it relates to curriculum, organization, personnel, finance, and communication; and their implications for teachers in the Newfoundland context.

Prerequisite: Completion of Professional Year or 405X.

Note: *Credit may not be obtained for both Education 4425 and the former Education 2410.*

**4430 Seminar: Current Issues in Native and Northern Affairs (PE)** - inactive course.

**4440 Teaching and Learning Mathematics in the Junior High School Years (PE)** - inactive course.

**4450 Practicum in Adult Education (A)** are on-the-job supervised activities designed to have the student implement the theory and principles of Adult Education.

**4480 Learning Resources in the Intermediate and Secondary School (IS,ISI)** - inactive course.

**4505 Life Skills and Transition Planning for Adolescents with Cognitive Challenges (SE)** will focus upon the application of educational procedures relevant to the successful employment and community adjustment of mildly and moderately developmentally disabled adolescents and young adults. Senior special education programs and materials directed toward personal life-skills development and work-study experience in both open- community and protected work situations will be reviewed.

**4510 Inclusive Practices for Children with Mild Cognitive Challenges (SE)** gives consideration to: the establishment of objectives; selection, development and review of materials; the use of various instructional procedures; and the provision of appropriate experiences for the education of children with mild mental disabilities at the primary, elementary and senior levels.

Prerequisite or Corequisite: Education 3610.

**4515 Inclusive Practices for Children with Moderate Cognitive Challenges (SE)** will consider objectives, the development of programs, and the use of various instructional procedures for the education of children with moderate mental disabilities. Emphasis will be given to the development of

skills necessary for participation in the home and community as well as in the classroom setting.

Prerequisite or Corequisite: Education 3610.

**4520 Psychoeducational Interventions for Behaviour Problems of Children and Adolescents (SE)** will examine programs and strategies for children with behaviour disabilities. These will include: counselling skills, case conferences, structured learning environments and therapeutic interventions for specific behaviour problems. In addition, consideration will be given to articulation with mental health specialists and procedures to develop readiness for return to regular instructional programs.

Prerequisite or Corequisite: Education 3620.

**4530 Inclusive Practices for Children with Learning Disabilities (SE)** is an examination of individual and classroom remedial techniques developed for the amelioration of specific learning disabilities.

Prerequisite or Corequisite: Education 3630.

**4540 Augmentative and Alternative Communication for Disabled Persons (SE)** - inactive course.

**4541 Communication for the Deaf (PE,SE)** is an introductory course in communication strategies employed with the Deaf and Hearing Impaired. Language acquisition by individuals with normal hearing and individuals with impaired hearing will be explored and contrasted through an analysis of a variety of modes. A laboratory component of the course is designed to impart a degree of skill in practical usage of American Sign Language and Finger Spelling. The primary emphasis will be on manual systems of communication common to the deaf, as well as those systems in use as supplementary instructional methods at Schools for the Deaf.

Prerequisite: Acceptance to the Special Education Degree program or permission of the Instructor.

**4543 Language and Deafness (PE,SE)** presents a broad overview of the effects of hearing impairment on individuals. Emphasis is on the effects of impaired linguistic environments; the cognitive, social, and emotional development of hearing impaired children and adults; the use and adaptation of assessment procedures; and the administration, organization, and delivery of instructional programs.

Prerequisite: Education 4242, 4240, or the former 3220, 3230 or equivalent.

**4580 Intermediate and Secondary Education and Culture (IS,ISI)** examines the nature of culture and its relationship to society and education. Topics include the process of cultural transmission through education, the significance of student culture in schooling, the influence of culture on curriculum decision-making, and cross-cultural ideology and practice in intermediate and secondary education.

**4600 Educational Research (PE,IS,ISI)** - inactive course.

**4610 The Nature and Management of Stress (PE,IS,ISI)** studies the nature of stress as it is manifested in the teacher and the teaching profession, and provides approaches to coping effectively with the factors which are related to that stress. Topics include the nature of the human stress response, causes and symptoms of stress (personal and professional), self-assessment techniques, and a selection of approaches available to cope with the stress typically related to the roles and expectancies of teaching.

**4700 Student Teaching in Post-Secondary Education (PS)** applies theories of education in the learning situation; observation and demonstration of lessons; seminars in teaching techniques.

Prerequisites: 2710, 2720, 2730, 2801, 3280, and 3801, or equivalent teaching experience and permission of the course instructor.

**4710 Seminar in Post-Secondary Education (PS)** identifies, analyses, and discusses major issues, practices and problems in Post-Secondary Education in Newfoundland and Canada.

Prerequisites: Education 2710, 2720 and 2730.

**4730 Educational Programs and Practices in Industry and Labour (PS)** is a study of the various Post-Secondary Education programs operated either wholly by industry and labour or jointly with educational institutions; apprenticeship, work experience and study programs, co-operative education, training-in-industry, training on-the-job, supervisory training, management development.

Prerequisites: Education 2710, 2720 and 2730.

**4750 Integrated Materials and Production Processes (ISI)** examines theory and practice in selected advanced technical skills in materials processes applied in conjunction with mechanical and fluid power and their practical applications in the modern technology education laboratory setting. Topics include integrated design, digital and fluidic control, robotics systems, and computer assisted machine applications.

**4751 Advanced Communications Systems (ISI)** examines theory and practice of selected advanced technical skills in communications technology as they apply to the modern technology education laboratory. Topics include development and utilization of computer networks; satellite, and various transmission technology found in communication processes.

**4752 Technology Education, Specialized (ISI)** examines theory and practice involving selected technical skills and their practical application in the technology education laboratory. Topics include the applications and use of more advanced technological systems and processes and their integration into the school curriculum of Newfoundland and Labrador.

Note: *A modular approach will be used for each of the 21 technical skills credit hours. Students who can demonstrate competency in a particular module will be allowed to substitute another module in its place. Students must select the substitute module in consultation with the Office of Undergraduate Student Services.*

**4760-4780 Advanced Specialized Post-Secondary Education Technologies (PS)** examines the theory and practice of selected advanced specialized Post-Secondary Education technical skills and their application to the laboratory, workshop and business office. Emphasis will be placed on innovative and emerging techniques in selected areas of business, industry, and the service occupations.

**4830 Music Education Seminar (ME)** is detailed examination of the foundations of Music education common to all levels and types of school Music. Topics include curriculum development, evaluation, psychology and philosophy of Music education and the Music teacher's administrative responsibilities.

Lectures: Three hours per week.

**4835 Orchestra Methods (ME)** - inactive course.

**4840 Advanced Band Methods (ME)** - inactive course.

**4845 Pre-School Music Education (ME)** - inactive course.

**4850 Advanced Primary School Music Methods (ME)** - inactive course.

**4855 Advanced Elementary School Music Methods (ME)** - inactive course.

**4860 Advanced Secondary School Music Methods (ME)** - inactive course.

**4901 Effective Teaching Strategies for Multi-grade/Multi-age Classrooms (PE,IS,ISI)** begins with a critical examination of traditional approaches to multi-grading. The main focus of the course will be to introduce teachers to the potential of adopting a multi-age approach in small schools which have of necessity grouped children of more than one age group and grade level together for instruction. This course will also examine the implications of implementing a philosophy of multi-age pedagogy in the primary, elementary and intermediate grades (K-9).

**4943 Computing Technology in Mathematics Education in the Primary and Elementary Grades (PE)** will explore the impact of computing technology on Mathematics curriculum and instruction. Topics will include the role of computers and calculators in developing mathematical concepts, computational skills and mathematical problem-solving processes; the use of computer animation and simulation to enhance Mathematics instruction; and, the evaluation and adaption of commercially developed software for Mathematics instruction. An in-depth look at LOGO and available CAL materials will be included.

Prerequisite: Education 3940.

**4944 Computing Technology in Mathematics Education in the Secondary School Grades** will explore the role of the computer as a provider of learning experiences in the high school Mathematics curriculum. The focus of the course will be on CAL in Mathematics and will investigate drill and practice, tutoring, simulation, animation, and demonstration. The role of the computer in communication and testing in Mathematics will be included.

Prerequisite: Education 4161.

**4945 Computers in Education (IS)** examines the use of computer-based technology across the curriculum. Topics include an introduction to hardware and operating systems, learning through computers, use and

evaluation of computer software, and an examination of specific curriculum issues.

**4950 Evaluation of Teaching and Learning (IS,ISI)** is an introduction to the theory and practice of evaluating teaching and student learning in the classroom. Topics include the nature of classroom assessment; the production, administration, interpretation, and evaluation of teacher-made tests; assessment of student products and performances by direct observation; grading and reporting progress; and the application of assessment results to the improvement of teaching.

Note: *Credit may be obtained for only one of Education 4950 or 4912.*

**4970-4980 Special Topics Courses in Intermediate/Secondary (IS)** will have topics offered which will be announced by the Faculty of Education.

## 4.1 Waiver Guidelines of Education 4700, Post-Sessional Block, 401X

- Students who have at least one year of teaching experience and who produce written reports from their former principal or other appropriate authority to the Office of Undergraduate Student Services certifying the quality of their experience to be satisfactory may be excused, at the discretion of the Office of Undergraduate Student Services the post-sessional block of student teaching.
- Students who have at least two years of Post-Secondary teaching experience, and who produce written reports from their former principal or other appropriate authority to the Office of Undergraduate Student Services, certifying the quality of their experience may be excused from Education 4700. Students who are excused from taking the student teaching course must substitute in its place an appropriate course in Education to make up the required total for the degree.
- Education 401X may, in special circumstances and upon individual request, be waived by the Office of Undergraduate Student Services in accordance with the guidelines listed below. Students requesting waiver should apply in writing and submit evidence of the following:
  - Permanent certification and tenure.
  - A minimum of five years teaching experience (or equivalent) in an environment appropriate to the degree sought.
  - Recommendation from an individual in an administrative position i.e. School Principal or Superintendent, attesting to the satisfactory quality of the teaching experience.

Students whose requests for waiver of the internship are approved must substitute in its place 15 appropriate credit hours in Education. These replacement credit hours will be determined by the Office of Undergraduate Student Services on an individual basis and must be approved by the Committee on Undergraduate Studies.
- Applications for waiver of student teaching in whole or in part not covered by these guidelines must be submitted to the Office of Undergraduate Student Services.

## 5 Institutes in Education

The Faculty of Education offers a number of Institutes in Education. These are intended primarily to provide opportunity for teachers to gain knowledge of new approaches to the teaching of existing school programs and to gain insight into aspects of new programs as they are introduced in the school system. These Institutes normally carry 6 or 9 credit hours. Students who enrol in Institutes of six weeks duration or less will not normally be permitted to register for any other courses. Additional information on Institutes may be obtained from the Faculty of Education. Not all Institutes are offered every semester or summer.

Note: *Students wishing to enrol in Institutes should contact the Office of Undergraduate Student Services.*



Archived Previous Calendar  
Current University Calendar available at  
[mun.ca/university-calendar](http://mun.ca/university-calendar)

*HUMAN KINETICS AND RECREATION*

# HUMAN KINETICS AND RECREATION

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**Director**

Bluehardt, M.H., B.P.H.E., M.Sc. *Lakehead*, Ph.D. *Toronto*;  
Professor

**Professors**

Behm, D.G., B.P.E., B.Ed. *Ottawa*, M.S. *McMaster*, Ph.D. *McGill*  
Higgs, C., Dip.Phys.Ed. *St. Luke's*, B.Sc., M.Sc. *Oregon*, M.Ed.  
*Memorial*, Ph.D. *Oregon*  
Loeffler, T.A., B.A. *Prescott College*, M.S. *Minnesota State*, Ph.D.  
*Minnesota*; CSU Teaching Award, 1998; Winner of the  
President's Award for Distinguished Teaching, 2005-2006

**Associate Professors**

Butler, F.T., B.P.E. *Memorial*, M.Ed.(P.E.) *Springfield*  
Kavanagh, B.G., B.P.E., B.Ed., M.P.E. *Memorial*, Ph.D. *Iowa*  
Kuester, V., Dip.Phys.Ed. *Durham*, M.Ed. *Bowling Green*  
MacKinnon, S., B.P.E. *New Brunswick*, M.Sc. *Dalhousie*; Ph.D.

*Cape Town*

Wheeler, R.E., B.P.E., B.Ed., M.P.E. *Memorial*, Ph.D. *Alberta*

**Assistant Professors**

Basset, F., B.P.E., M.Sc., Ph.D. *Laval*  
Card, A., B.Ed.(Hons) *DeMontfort*, M.A.(Ed.), Ed.D. *Southampton*  
Rohr, L.E., B.Sc., M.Sc., Ph.D. *Waterloo*  
Sullivan, A.M., B.Rec. *Dalhousie*, M.A., Ph.D. *Waterloo*

**Co-operative Programs**

Downey, J.A., B.Sc. *Memorial*; Manager  
Innes, G., B.A.(Hons.) *York University*, M.A.L.S. *Wesleyan*  
*University*; Co-ordinator

**Academic Student Advisor**

Saunders, J., B.Ed.(Post-Secondary), M.Ed. *Memorial*

## 1 School Description

The School of Human Kinetics and Recreation offers undergraduate and graduate degrees in kinesiology, physical education, and recreation. The School's programs prepare students to meet societal needs for professionals who are able to initiate and manage health and lifestyle-enhancing programs. The School encourages a close working relationship among students, faculty, and staff, and with local and national sport, health, and professional organizations. Co-operative education programs provide for the integration of academic and professional knowledge. A full-time academic student advisor within the School assists students with decisions related to their academic program. The School prides itself on the extent to which senior undergraduate and graduate students are engaged in teaching, research, and scholarly activity. Many graduates of the School are leaders in the fields of physical education, sport, kinesiology, health, and recreation.

## 2 Description of Programs

Students must meet all regulations of the School in addition to those stated in the general regulations. For information concerning fees and charges, admission/readmission to the University, and general academic regulations (undergraduate), refer to **UNIVERSITY REGULATIONS**.

### 2.1 General Degrees

The School of Human Kinetics and Recreation offers six general degrees in three program areas. For specific details on each degree refer to the appropriate **Program Regulations - General and Honours Degrees**. All courses of the School are designated by the abbreviation HKR.

#### 2.1.1 Kinesiology Degrees

Kinesiology degrees are designed to prepare graduates for careers in ergonomics, fitness, health and wellness, and lifestyle professions. The kinesiology degree programs consist of School courses in addition to a flexible choice of electives. The two kinesiology degrees are:

- **Bachelor of Kinesiology (Co-operative)**: is comprised of 120 credit hours and three work terms and is taken on a full-time basis.
- **Bachelor of Kinesiology**: is comprised of 120 credit hours and can be taken on a full-time or part-time basis.

#### 2.1.2 Physical Education Degrees

Physical Education degrees are designed to prepare graduates for careers in teaching and related areas. There are two physical education degrees with teaching and general options available within each degree.

The teaching option contains courses in the fundamentals of physical education as well as courses in curriculum planning, teaching methods, and pedagogy relevant to physical education curricula for various grade levels. Within the teaching option students will be placed in an educational setting for some of the course work. Following completion of a physical education degree - teaching option, a student wishing to teach in a school setting normally completes an intermediate/secondary degree program offered by the Faculty of Education. For information regarding admission requirements to the intermediate/secondary programs refer to the **FACULTY OF EDUCATION** section of this Calendar.

The general option is designed to provide basic professional preparation. The general option of the program consists of courses common to the teaching option plus a flexible choice of electives, without the requirement for curriculum and methods courses.

The two physical education degrees are:

- **Bachelor of Physical Education (Co-operative)**: is comprised of 120 credit hours and three work terms and is taken on a full-time basis. This program is offered in the teaching and general options.
- **Bachelor of Physical Education**: is comprised of 120 credit hours and can be taken on a full-time or part-time basis. This program is offered in the teaching and general options.

#### 2.1.3 Recreation Degrees

Recreation degrees are designed to provide students with the opportunity to develop professional competencies in recreation and leisure service management. The students will also gain an understanding of the social, physical, psychological, cultural, economic, and political issues that influence recreation and leisure participation, delivery, and management. The two recreation degrees are:

- **Bachelor of Recreation (Co-operative)**: is comprised of 120 credit hours and three work terms and is taken on a full-time basis.
- **Bachelor of Recreation**: is comprised of 120 credit hours and can be taken on a full-time or part-time basis.

### 2.2 Honours Degrees

Honours degrees signify superior academic achievement in kinesiology and physical education programs and superior academic achievement with specific course work in recreation programs. To graduate with honours, application must be made on the prescribed form which is available from the School or the Office of the Registrar. For further information on honours degrees see **Program Regulations - General and Honours Degrees**.

## 2.3 Work Terms in Co-operative Programs

Students registered for work terms are also governed by the *Co-operative Student Handbook*. Prior to registering for the first work term, students must successfully complete the course Professional Development Seminars.

### 2.3.1 General Information

- During work terms students are brought into direct contact with the kinesiology, physical education, and recreation professions, exposed to the work place setting, expected to assume ever-increasing responsibility in employment situations as their education advances, and introduced to experiences beyond the scope of those which could be provided in the classroom.
- Students are responsible for finding suitable work placements. The Co-operative Education Office of the School provides resources to assist in this process.
- In addition to a work term, students may register for up to 6 credit hours, although they are advised to consult the School's Academic Student Advisor.
- Students are not permitted to drop work terms without prior approval of the Committee on Undergraduate Studies and with the recommendation of the Co-operative Education Office of the School. Students who drop a work term without permission, or who fail to honour an agreement to work with an employer, will be assigned a grade of FAL (fail) for that work term.
- Students who conduct themselves in such a manner as to cause their termination from the job, will be assigned a grade of FAL (fail) for that work term.
- Students are expected to maintain professional ethics, including confidentiality.

### 2.3.2 Work Term Reports

- A work term report, on a topic approved by the Co-operative Education Office of the School, must be submitted for each work term. The report must be approved by the employer and submitted by the student to the Co-operative Education Office of the School on or before the appropriate deadline in the University Diary.
- Late work term reports will not be evaluated unless prior permission for a late work term report has been granted by the Co-operative Education Office of the School.

### 2.3.3 Evaluation of Work Terms

- Two components are considered in work term evaluation: on-the-job performance and the work term report. Each component is evaluated separately and equally. The overall evaluation of work terms will result in the assignment of one of the following letter grades: PWD (pass with distinction), PAS (pass) or FAL (fail).

## 3 Admission/Readmission Regulations for the School of Human Kinetics and Recreation

In addition to meeting the **UNIVERSITY REGULATIONS** students must meet the admission/readmission regulations for the School of Human Kinetics and Recreation.

### 3.1 General Information

1. Entry to programs offered by the School is competitive for a limited number of placements. Meeting the minimum requirements for admission does not guarantee acceptance into the program. The final decision on admission rests with the Admissions Committee of the School.
2. Admission or readmission to the University does not necessarily constitute admission or readmission to any program.

### 3.2 Application Forms and Deadlines

1. All programs of the School commence in the Fall semester. The deadline for application for admission is March 1.
2. The deadline for application for readmission, for students who were previously admitted to a School program, is June 1 for the Fall semester, October 1 for Winter, and February 1 for Spring.
3. Application forms are available in person from the School's General Office and the Office of the Registrar or through the School's website at [www.mun.ca/hkr](http://www.mun.ca/hkr). Applications forms may also be obtained by writing the School of Human Kinetics and Recreation, Memorial University of Newfoundland, St. John's, NL, A1C 5S7 or the Office of the Registrar, Admissions Office, Memorial University of Newfoundland, St. John's, NL, A1C 5S7.
4. Applicants applying to more than one program must submit separate application forms and supporting documentation for each program.
5. All applications for admission or readmission must be submitted to the Office of the Registrar. A complete application includes an application to the University (for those who have not attended Memorial University of Newfoundland in the two preceding semesters), an application to the School, an autobiographical statement, and any other required supporting documentation. Application fees must be paid when the application forms are submitted.
6. In addition to these requirements, students applying to the physical education programs must:
  - submit a current first aid certificate, and
  - complete the School's swim test. Students applying from outside St. John's should call the School's General Office at (709) 737-8130 to contact the swim test coordinators to arrange for testing. In lieu of the School swim test, a level 8 Red Cross or other credential satisfactory to the School may be accepted. Students unable to complete the swim test requirement before beginning their program must successfully complete this requirement by the end of October of their first semester of admission to the program. Failure to do so will result in the student being required to withdraw from the program at the end of their first semester.

### 3.3 Admission Requirements to School Programs

Applicants may apply for admission to School programs under the **Categories Of Applicants, Admission Criteria and Other Information** outlined under **UNIVERSITY REGULATIONS - Admission/Readmission to the University (Undergraduate)**. In addition to meeting these regulations, applicants in the following categories, other than those applying for admission to the Bachelor of Recreation degree program, must meet the additional requirements as indicated below.

### 3.3.1 High School Applicants

- High school applicants to the kinesiology degree programs must have completed:
  - Level III Laboratory Science with a grade of at least 70%, and either
  - Level III Advanced Mathematics, or Level III Academic Mathematics with a grade of at least 70%, or Level III Academic Mathematics and a score on the Mathematics Placement Test acceptable to the Department of Mathematics and Statistics. For further information on the Mathematics Placement Test contact the Department of Mathematics and Statistics.
- Applicants to the Bachelor of Recreation degree program cannot apply under this category and must apply under **Memorial University of Newfoundland Applicants** or **Transfer Applicants**.

### 3.3.2 Memorial University of Newfoundland Applicants

- To be eligible for consideration for admission to all programs, other than the Bachelor of Recreation degree program, students who are attending or have previously attended this University must have a cumulative average of 60% or an average of 65% on their last 30 credit hours.
- To be eligible for consideration for admission to the Bachelor of Recreation degree program, students are required to complete a minimum of 15 credit hours in the courses indicated in **Table 8 Bachelor of Recreation - Course and Credit Hour Requirements**. Applicants must have achieved an overall average of at least 60% in the courses comprising the required 15 credit hours.
- Overall academic performance is an important criterion in reaching decisions on applications for admission, and will be considered, in addition to the average on the five courses required for admission, in the selection process.
- Applicants to the Bachelor Recreation degree program must have at least five years of relevant work experience, or equivalent, that is deemed acceptable by the Admissions Committee of the School of Human Kinetics & Recreation.
- Students who are attending or have previously attended this University are not required to submit a copy of their transcript with their application(s).

### 3.3.3 Transfer Applicants

- Applicants seeking admission through transfer from accredited post-secondary institutions must have achieved a minimum overall average of 60% to be considered for admission.
- A student's placement within a program, and requirements needed to complete the program, will be determined on an individual basis at the time of admission. No applicant will be granted placement beyond Academic Term 4.
- Transfer applicants must request that an official transcript showing any completed courses and current registrations be forwarded to the Office of the Registrar. Final transcripts must be submitted upon receipt of final grades.

## 3.4 Other Information

1. The School will notify applicants in writing regarding an admission decision to a School program.
2. Students admitted to a program at any level beyond Academic Term 1, without successfully completing all courses required up to that level, must successfully complete those courses prior to the end of their last academic term. Successful completion shall mean a minimum grade of 50% in every non-HKR course and a minimum grade of 60% in every HKR course.
3. Students who have been admitted to one program offered by the School and who wish to change to another program within the School must submit a new application for admission to the program. This application must be submitted to the Office of the Registrar by the March 1 deadline date and will be considered in competition with all other applications.
4. Students admitted full time to a program and who decline the offer of admission or who fail to register for courses during the Fall term of admission will be considered withdrawn from the program. Such students, if they subsequently wish to be considered for admission, must submit a new application for admission to the program. This application must be submitted to the Office of the Registrar by the March 1 deadline date and will be considered in competition with other applications.
5. Students admitted part time to a program and who decline the offer of admission or who fail to register for courses and to successfully complete at least 6 credit hours applicable to the degree during each academic year will be considered withdrawn from the program. Such students, if they subsequently wish to be considered for admission, must submit a new application for admission to the program. This application must be submitted to the Office of the Registrar by the March 1 deadline date and will be considered in competition with other applications.
6. In the case where students have been required to withdraw from the Bachelor of Recreation (Co-operative) Programs, the Admissions Committee of the School may consider this circumstance as grounds to deny admission to applicants to the Bachelor of Recreation degree program.

## 4 Program Regulations - General and Honours Degrees

### 4.1 Bachelor of Kinesiology (Co-operative)

- The full-time 120 credit hour Bachelor of Kinesiology (Co-operative) requires 69 HKR credit hours, 51 non-HKR credit hours, and three work terms.
- The 120 credit hours shall normally be taken in the academic terms in the sequence and course load as set out in **Table 1 Bachelor of Kinesiology (Co-operative)**. Students wishing to change the sequence and/or reduce the course load required in the academic terms must first consult with the School's Academic Student Advisor.
- Work Terms shall be taken in the term and sequence as set out in **Table 1 Bachelor of Kinesiology (Co-operative)**.

**Table 1 Bachelor of Kinesiology (Co-operative)**

Term	Required Courses	Elective Courses
Fall Academic Term 1	Chemistry 1010 or Chemistry 1050 English 1080 or equivalent HKR 2000 Mathematics 1000 Psychology 1000	
Winter Academic Term 2	Chemistry 1011 or Chemistry 1051 English 1110 or equivalent HKR 2300 Psychology 1001 Physics 1020 or Physics 1050	
Spring	Open	
Fall Academic Term 3	Biology 2040 Computer Science 2650 (recommended) or Computer Science 1700 HKR 1123 HKR 2310 Statistics 2550	6 credit hours from non-HKR courses other than those listed under <b>Required Courses</b>
Winter Academic Term 4	HKR 2320 HKR 2600 or Biochemistry 2600 HKR 3320 HKR 3340	3 credit hours from HKR courses at the 2000 level or above 3 credit hours from non-HKR courses at the 2000 level or above other than those listed under <b>Required Courses</b>
Spring Work Term 1	HKR 299W	
Fall Academic Term 5	HKR 3300 HKR 3310 HKR 3410 HKR 4320	3 credit hours from HKR courses at the 2000 level or above 3 credit hours from non-HKR courses at the 2000 level or above other than those listed under <b>Required Courses</b>
Winter Work Term 2	HKR 399W	
Spring Academic Term 6	HKR 2703 HKR 4310 HKR 4330 HKR 4420 HKR 4600	3 credit hours from: HKR 2002, 2004, 2100, 2585, 3002, 3330, 3350, 3360, 3535, 4545, 4555, 4565, 4585, 4700, 4701, or 4720
Fall Work Term 3	HKR 499W	
Winter Academic Term 7	HKR 4702 HKR 4703	3 credit hours from: HKR 2002, 2004, 2585, 2100, 3002, 3330, 3350, 3360, 3535, 4545, 4555, 4565, 4585, 4700, 4701, or 4720 3 credit hours from HKR courses at the 2000 level or above other than those listed under <b>Required Courses</b> (Honours degree candidates must include HKR 4610 in their program in place of this elective) 6 credit hours from non-HKR courses at the 2000 level or above other than those listed under <b>Required Courses</b>

## 4.2 Bachelor of Physical Education (Co-operative)

### 4.2.1 Teaching Option

- The full-time 120 credit hour Bachelor of Physical Education (Co-operative) - Teaching Option requires 69 HKR credit hours, 51 non-HKR credit hours, three work terms, and a first aid certificate and a CPR certificate both of which must be current at the time of graduation.
- The 120 credit hours shall normally be taken in the academic terms in the sequence and course load as set out in **Table 2 Bachelor of Physical Education (Co-operative) - Teaching Option**. Students wishing to change the sequence and/or reduce the course load required in the academic terms must first consult with the School's Academic Student Advisor.
- The three work terms shall be taken in the term and sequence as set out in **Table 2 Bachelor of Physical Education (Co-operative) - Teaching Option**.
- Students following the teaching option, and who plan to complete one of the intermediate/secondary degree programs offered by the Faculty of Education at this University, must choose a minor of at least 24 credit hours from one of the academic disciplines listed in the intermediate/secondary degree regulations. In completing the minor, students must follow the minor program regulations listed under the appropriate faculty or school.

**Table 2 Bachelor of Physical Education (Co-operative) - Teaching Option**

Term	Required Courses	Elective Courses
Fall Academic Term 1	English 1080 or equivalent HKR 1123 HKR 2000 HKR 2100 3 credit hours in a laboratory science (either Biology, Chemistry, or Physics is recommended) 3 credit hours in Mathematics	
Winter Academic Term 2	English 1110 or equivalent HKR 2300 3 credit hours in a laboratory science (either Biology, Chemistry, or Physics is recommended) 3 credit hours in Mathematics Psychology 1000	
Spring Work Term 1	HKR 299W	
Fall Academic Term 3	HKR 2210 HKR 2310 Psychology 1001	6 credit hours from minor subject
Winter Academic Term 4	HKR 2220 HKR 2320 HKR 3340 Statistics 2500 or equivalent	3 credit hours from minor subject
Spring Work Term 2	HKR 399W	
Fall Academic Term 5	HKR 3110 HKR 3210 or HKR 3220 HKR 3300 HKR 3310	
Winter Academic Term 6	HKR 2004 HKR 3320 HKR 4310	6 credit hours from minor subject
Spring Work Term 3	HKR 499W	
Fall Academic Term 7	HKR 3220 (if not previously completed) or HKR 4220 HKR 4320 HKR 4420 HKR 4600 First aid and CPR certification, both of which must be current at time of graduation, must be submitted to the School's Academic Student Advisor.	3 credit hours from minor subject
Winter Academic Term 8	HKR 4210 First aid and CPR certification, both of which must be current at time of graduation, must be submitted to the School's Academic Student Advisor.	6 credit hours from minor subject 6 credit hours from HKR courses at the 2000 level or above other than those listed under <b>Required Courses</b> (Honours degree candidates must include HKR 4610 in their program in place of one of these electives)

### 4.2.2 General Option

- The full-time 120 credit hour Bachelor of Physical Education (Co-operative) - General Option requires 69 HKR credit hours, 51 non-HKR credit hours, three work terms, and a first aid certificate and a CPR certificate both of which must be current at the time of graduation.
- The 120 credit hours shall normally be taken in the academic terms in the sequence and course load as set out in **Table 3 Bachelor of Physical Education (Co-operative) - General Option**. Students wishing to change the sequence and/or reduce the course load required in the academic terms must first consult with the School's Academic Student Advisor.
- The three work terms shall be taken in the term and sequence as set out in **Table 3 Bachelor of Physical Education (Co-operative) - General Option**.
- Students following the general option must choose a minor of at least 24 credit hours from the minor programs listed in the appropriate faculty or school regulations. In completing the minor, students must follow the minor program regulations listed under the appropriate faculty or school.

**Table 3 Bachelor of Physical Education (Co-operative) - General Option**

Term	Required Courses	Elective Courses
Fall Academic Term 1	English 1080 or equivalent HKR 1123 HKR 2000 HKR 2100 3 credit hours in a laboratory science (either Biology, Chemistry, or Physics is recommended) 3 credit hours in Mathematics	
Winter Academic Term 2	English 1110 or equivalent HKR 2300 3 credit hours in a laboratory science (either Biology, Chemistry, or Physics is recommended) 3 credit hours in Mathematics Psychology 1000	
Spring Work Term 1	HKR 299W	
Fall Academic Term 3	HKR 2210 HKR 2310 Psychology 1001	6 credit hours from minor subject
Winter Academic Term 4	HKR 2220 HKR 2320 HKR 3340 Statistics 2500 or equivalent	3 credit hours from minor subject
Spring Work Term 2	HKR 399W	
Fall Academic Term 5	HKR 3210 or HKR 3220 HKR 3300 HKR 3310	6 credit hours from minor subject
Winter Academic Term 6	HKR 2004 HKR 3320 HKR 4310	3 credit hours from minor subject 3 credit hours from HKR courses at the 2000 level or above
Spring Work Term 3	HKR 499W	
Fall Academic Term 7	HKR 3220 (if not previously completed) or HKR 4220 HKR 4320 HKR 4420 HKR 4600 First aid and CPR certification, both of which must be current at time of graduation, must be submitted to the School's Academic Student Advisor.	3 credit hours from minor subject
Winter Academic Term 8	HKR 4210 First aid and CPR certification, both of which must be current at time of graduation, must be submitted to the School's Academic Student Advisor.	3 credit hours from minor subject 9 credit hours from HKR courses at the 2000 level or above other than those listed under <b>Required Courses</b> (Honours degree candidates must include HKR 4610 in their program in place of one of these electives)



### 4.3 Bachelor of Recreation (Co-operative)

- The full-time Bachelor of Recreation (Co-operative) requires 120 credit hours and three work terms.
- The 120 credit hours shall normally be taken in the academic terms in the sequence and course load as set out in **Table 4 Bachelor of Recreation (Co-operative)**. Students wishing to change the sequence and/or reduce the course load required in the academic terms must first consult with the School's Academic Student Advisor.
- The three work terms shall be taken in the sequence as set out in **Table 4 Bachelor of Recreation (Co-operative)**.
- Students must choose a minor of at least 24 credit hours from the minor programs listed in the appropriate faculty or school regulations. In completing the minor, students must follow the minor program regulations listed under the appropriate faculty or school.

**Table 4 Bachelor of Recreation (Co-operative)**

Term	Required Courses	Elective Courses
Fall Academic Term 1	Business 1000 English 1080 or equivalent Psychology 1000 Mathematics 1000; or 6 credit hours chosen from Mathematics 1050/1051 or Mathematics 1090/1000 Sociology 1000	
Winter Academic Term 2	Business 1201 Business 2000 or English 1110 or equivalent Psychology 1001 Mathematics 1000; or 6 credit hours chosen from Mathematics 1050/1051 or Mathematics 1090/1000	Students who complete only Mathematics 1000 must include an additional 3 credit hours from non-HKR courses in their program. 3 credit hours from minor subject or non-HKR courses
Spring	Open	
Fall Academic Term 3	HKR 1123 HKR 2000 HKR 2310 HKR 2515 HKR 2585 Statistics 2500	3 credit hours from minor subject
Winter Academic Term 4	HKR 2300 HKR 2320 HKR 2505 HKR 3340 HKR 4600	3 credit hours from minor subject
Spring Work Term 1	HKR 299W	
Fall Academic Term 5	HKR 3525 HKR 3535 HKR 3575	3 credit hours from HKR courses 6 credit hours from minor subject Honours degree candidates must include HKR 4625 or HKR 4635 in their program. This may be substituted for one of the HKR elective courses in this semester.
Winter Work Term 2	HKR 399W	
Spring Academic Term 6	HKR 2545 HKR 3555 HKR 3565 HKR 4555 HKR 4575	3 credit hours from HKR courses
Fall Work Term 3	HKR 499W	
Winter Academic Term 7	HKR 4575 HKR 4585	6 credit hours from HKR courses (Honours degree candidates must include HKR 4610 in their program in place of one of these electives) 6 credit hours from minor subject or non- HKR courses

#### 4.4 Bachelor of Kinesiology

- The full-time and part-time 120 credit hour Bachelor of Kinesiology requires 69 HKR credit hours and 51 non-HKR credit hours.
- Students admitted full time shall normally complete the 120 credit hours in the academic terms in the sequence and course load as set out in **Table 5 Bachelor of Kinesiology**. Students wishing to change the sequence and/or reduce the course load required in the academic terms must first consult with the School's Academic Student Advisor.
- Students admitted part time should consult with the School's Academic Student Advisor regarding course sequence.

**Table 5 Bachelor of Kinesiology**

Term	Required Courses	Elective Courses
Fall Academic Term 1	Chemistry 1010 or Chemistry 1050 English 1080 or equivalent HKR 2000 Mathematics 1000 Psychology 1000	
Winter Academic Term 2	Chemistry 1011 or Chemistry 1051 English 1110 or equivalent HKR 2300 Psychology 1001 Physics 1020 or Physics 1050	
Spring	Open	
Fall Academic Term 3	Biology 2040 Computer Science 2650 (recommended) or Computer Science 1700 HKR 2310 Statistics 2550	6 credit hours from non-HKR courses other than those listed under <b>Required Courses</b>
Winter Academic Term 4	HKR 2320 HKR 2600 or Biochemistry 2600 HKR 3320 HKR 3340	3 credit hours from HKR courses at the 2000 level or above 3 credit hours from non-HKR courses at the 2000 level or above other than those listed under <b>Required Courses</b>
Spring Academic Term 5	HKR 2703 HKR 4330 HKR 4310 HKR 4420 HKR 4600	3 credit hours from non-HKR courses at the 2000 level or above other than those listed under <b>Required Courses</b>
Fall Academic Term 6	HKR 3300 HKR 3310 HKR 3410 HKR 4320	3 credit hours from HKR courses at the 2000 level or above 3 credit hours from: HKR 2002, 2004, 2100, 2585, 3002, 3330, 3350, 3360, 3535, 4545, 4555, 4565, 4585, 4700, 4701, or 4720
Winter Academic Term 7	HKR 4702 HKR 4703	3 credit hours from: HKR 2002, 2004, 2100, 2585, 3002, 3330, 3350, 3360, 3535, 4545, 4555, 4565, 4585, 4700, 4701, or 4720 3 credit hours from HKR courses at the 2000 level or above other than those listed under <b>Required Courses</b> (Honours degree candidates must include HKR 4610 in their program in place of this elective) 6 credit hours from non-HKR courses at the 2000 level or above other than those listed under <b>Required Courses</b>

## 4.5 Bachelor of Physical Education

### 4.5.1 Teaching Option

- The full-time and part-time 120 credit hour Bachelor of Physical Education - Teaching Option requires 69 HKR credit hours, 51 non-HKR credit hours, and a first aid certificate and a CPR certificate both of which must be current at the time of graduation
- Students admitted full time shall normally complete the 120 credit hours in the academic terms in the sequence and courses load as set out in **Table 6 Bachelor of Physical Education - Teaching Option**. Students wishing to change the sequence and/or reduce the course load required in the academic terms must first consult with the School's Academic Student Advisor.
- Students admitted part time should consult with the School's Academic Student Advisor regarding course sequence.
- Students following the teaching option, and who plan to complete one of the intermediate/secondary degree programs offered by the Faculty of Education at this University, must choose a minor of at least 24 credit hours from one of the academic disciplines listed in the intermediate/secondary degree regulations. In completing the minor, students must follow the minor program regulations listed under the appropriate faculty or school.

**Table 6 Bachelor of Physical Education - Teaching Option**

Term	Required Courses	Elective Courses
Fall Academic Term 1	English 1080 or equivalent HKR 2000 HKR 2100 3 credit hours in a laboratory science (either Biology, Chemistry, or Physics is recommended) 3 credit hours in Mathematics	
Winter Academic Term 2	English 1110 or equivalent HKR 2300 3 credit hours in a laboratory science (either Biology, Chemistry, or Physics is recommended) 3 credit hours in Mathematics Psychology 1000	
Fall Academic Term 3	HKR 2210 HKR 2310 Psychology 1001	6 credit hours from minor subject
Winter Academic Term 4	HKR 2220 HKR 2320 HKR 3340 Statistics 2500 or equivalent	3 credit hours from minor subject
Fall Academic Term 5	HKR 3110 HKR 3210 or HKR 3220 HKR 3300 HKR 3310	
Winter Academic Term 6	HKR 2004 HKR 3320 HKR 4310	6 credit hours from minor subject
Fall Academic Term 7	HKR 3220 (if not previously completed) or HKR 4220 HKR 4320 HKR 4420 HKR 4600 First aid and CPR certification, both of which must be current at time of graduation, must be submitted to the School's Academic Student Advisor.	3 credit hours from minor subject
Winter Academic Term 8	HKR 4210 First aid and CPR certification, both of which must be current at time of graduation, must be submitted to the School's Academic Student Advisor.	6 credit hours from minor subject 6 credit hours from HKR courses at the 2000 level or above other those listed under <b>Required Courses</b> (Honours degree candidates must include HKR 4610 in their program in place of one of these electives)

### 4.5.2 General Option

- The full-time and part-time 120 credit hour Bachelor of Physical Education - General Option requires 69 HKR credit hours, 51 non-HKR credit hours, and a first aid certificate and a CPR certificate both of which must be current at the time of graduation.
- Students admitted full time shall normally complete the 120 credit hours in the academic terms in the sequence and course load as set out in **Table 7 Bachelor of Physical Education - General Option**. Students wishing to change the sequence and/or reduce the course load required in the academic terms must first consult with the School's Academic Student Advisor.
- Students admitted part time should consult with the School's Academic Student Advisor regarding course sequence.
- Students following the general option must choose a minor of at least 24 credit hours from the minor programs listed in the appropriate faculty or school regulations. In completing the minor, students must follow the minor program regulations listed under the appropriate faculty or school.

**Table 7 Bachelor of Physical Education - General Option**

Term	Required Courses	Elective Courses
Fall Academic Term 1	English 1080 or equivalent HKR 2000 HKR 2100 3 credit hours in a laboratory science (either Biology, Chemistry, or Physics is recommended) 3 credit hours in Mathematics	
Winter Academic Term 2	English 1110 or equivalent HKR 2300 3 credit hours in a laboratory science (either Biology, Chemistry, or Physics is recommended) 3 credit hours in Mathematics Psychology 1000	
Fall Academic Term 3	HKR 2210 HKR 2310 Psychology 1001	6 credit hours from minor subject
Winter Academic Term 4	HKR 2220 HKR 2320 HKR 3340 Statistics 2500 or equivalent	3 credit hours from minor subject
Fall Academic Term 5	HKR 3210 or HKR 3220 HKR 3300 HKR 3310	6 credit hours from minor subject
Winter Academic Term 6	HKR 2004 HKR 3320 HKR 4310	3 credit hours from minor subject 3 credit hours from HKR courses at the 2000 level or above
Fall Academic Term 7	HKR 3220 (if not previously completed) or HKR 4220 HKR 4320 HKR 4420 HKR 4600 First aid and CPR certification, both of which must be current at time of graduation, must be submitted to the School's Academic Student Advisor.	3 credit hours from minor subject
Winter Academic Term 8	HKR 4210 First aid and CPR certification, both of which must be current at time of graduation, must be submitted to the School's Academic Student Advisor.	3 credit hours from minor subject 9 credit hours from HKR courses at the 2000 level or above other than those listed under <b>Required Courses</b> (Honours degree candidates must include HKR 4610 in their program in place of one of these electives)

## 4.6 Bachelor of Recreation

- The full-time and part-time Bachelor of Recreation is comprised of 120 credit hours as set out in **Table 8 Bachelor of Recreation - Course Requirements**.
- Students admitted part-time should consult with the School's Academic Student Advisor regarding course sequence.

**Table 8 Bachelor of Recreation - Course and Credit Hour Requirements**

<p><b>Courses Required for Application</b>          English 1080          English 1110 or Business 2000 or equivalent          Mathematics 1050 and 1051, or Mathematics 1090 and 1000          Three credit hours from non-HKR courses</p>	<p><b>Required Courses</b>          HKR 2000, 2300, 2310, 2320, 2505, 2515, 2545, 2585, 3340, 3525, 3535, 3555, 3565, 3575, 4555, 4575, 4585, 4600          Psychology 1000          Psychology 1001          Sociology 1000 or 2000          Business 1000          Business 1201          Statistics 2500          A minor of at least 24 credit hours from the minor programs listed in the appropriate faculty or school regulations, in accordance with the minor program regulations listed under the appropriate faculty or school.</p>
	<p><b>Electives</b>          12 credit hours in HKR courses other than those listed under <b>Required Courses</b> (Honours degree candidates must include HKR 4610 in their program in place of one of these electives)</p>

## 4.7 Honours Degrees

1. An honours degree signifies superior academic achievement.
2. An application for admission to any of the honours degrees is not required. Rather, students indicate on the prescribed application for graduation form that they wish to be considered for an honours degree.
3. To receive an honours degree, a candidate shall:
  - meet the requirements of the general degree;
  - successfully complete HKR 4600 and HKR 4610 with a minimum grade of 75% in each course
  - obtain an overall average of 75% or better on all HKR courses for the degree; and
  - obtain an overall average of 70% on the 120 credit hours required for the degree.
4. In addition to meeting the above-noted requirements, candidates for an honours degree in recreation shall include HKR 4610, and either HKR 4625 or HKR 4635 in their degree program.
5. A candidate for the honours degree who does not fulfill these conditions but fulfills the requirements for the general degree shall be awarded the general degree.
6. Candidates are not permitted to repeat or substitute courses or work terms for the purpose of meeting the academic requirements for honours degrees.
7. A candidate who, for academic reasons, has been required to withdraw from a program offered by the School will not be eligible for the honours degree.

## 5 Promotion Regulations

### 5.1 General Information

- In addition to meeting the promotion regulations for the School of Human Kinetics and Recreation all students must meet the general academic regulations (undergraduate). For further information refer to **UNIVERSITY REGULATIONS - General Academic Regulations (Undergraduate)**.
- Success in the programs depends on meeting the requirements of both academic terms and work terms.
- To be promoted a student must, in addition to obtaining the requisite grades and average, complete and deliver all work term reports as required.

### 5.2 Promotion Status

- A student's promotion status at the end of each term will be in one of the following four categories:

#### 5.2.1 Clear Promotion

Clear Promotion means a student can proceed to the next term without restrictions.

- Students completing an academic term will receive a Clear Promotion by obtaining an overall average of at least 60%, with a numeric grade of at least 60% in each HKR course, and a numeric grade of at least 50% in each non-HKR course.
- Students completing a work term will receive a Clear Promotion by obtaining a PAS (pass) or a PWD (pass with distinction) in the work term.
- Students completing courses in addition to a work term must obtain a PAS (pass) or a PWD (pass with distinction) in the work term and an overall average of at least 60%, with a numeric grade of at least 60% in each HKR course, and at least 50% in each non-HKR course

#### 5.2.2 Probationary Promotion

Probationary Promotion designates less than a Clear Promotion but requires an overall average of at least 60%, with a numeric grade of at least 50% in each course, and not more than one HKR course with a numeric grade below 60%.

- A student with Probationary Promotion at the end of Academic Term 1 may be permitted to enter Academic Term 2 but must have

Clear Promotion by the end of Academic Term 2.

- A student with Probationary Promotion from any academic term may continue to the subsequent work term under the condition that entry into the next academic term is not allowed until the student's status is changed to Clear Promotion.
- A student with Probationary Promotion at the end of the final academic term will not be recommended for graduation until the student's status is changed to Clear Promotion.
- To change Probationary Promotion to Clear Promotion the student must satisfy the School that he or she is competent in the subject of the HKR course in which the student has failed to achieve 60%. This will normally entail re-examination, after which the student will be declared to have passed or failed a test of competency in the subject concerned. No numerical grade will be assigned in the re-examination, and the original grade submitted for the course will not be changed.
- Re-examination may be written, oral, practical or a combination of formats and will be at a time determined by the School.
- Only one re-examination is permitted per course. Failure to submit to the re-examination or failure in the re-examination will result in denial of promotion. If the student is subsequently readmitted to the School, he or she must repeat or replace the course in which re-examination was unsuccessful.
- A maximum of two re-examinations is permitted in a student's degree program. If a student is awarded a grade of less than 60% in a third HKR course, the student will be required to repeat or replace the course.
- It is the responsibility of the student to arrange for re-examination before the end of the first week of the student's next academic term. If re-examination is not arranged in accordance with this time frame, the student will be required to repeat or replace the course.
- The School may recommend that the student complete remedial studies before re-examination.

### 5.2.3 Probationary (A) Promotion

Probationary (A) Promotion designates failure to successfully complete the required components of HKR 2210, 2220, 3210, 3220, 4210 and 4220 in a given term.

- Probationary (A) Promotion will be given upon the recommendation of the course instructor/coordinator and/or the Committee on Undergraduate Studies and only for extreme circumstances, duly authenticated.
- A student with Probationary (A) Promotion in any term will be permitted to enter subsequent terms and will receive a letter grade of INC (incomplete) in the course. A final numeric grade will not be received until the required components of each course has been successfully completed. Academic Council will grant this status, taking into account the specific factors involved in each case. This status is not automatic, as failure to successfully complete all required components of each course would normally result in a failing grade.
- A student with Probationary (A) Promotion at the end of the final academic term will not be recommended for graduation until the student has successfully completed all required components of all courses, and the student's status is changed to Clear Promotion.

### 5.2.4 Promotion Denied

Promotion Denied indicates Clear Promotion is not achieved each term or following probation.

- A student with Promotion Denied status will be required to withdraw from the School. Students with Promotion Denied status may apply for readmission to the program after two semesters. A student will normally be readmitted into the term from which promotion was denied.
- A student who is denied promotion for failing a work term may be considered for readmission after the lapse of two semesters, at which time the student will be required to complete a further work term with satisfactory performance before being admitted to any further academic term in the School. A work term may be repeated only once, and not more than two work terms may be repeated in the entire program.
- A student who has been denied promotion as a result of having failed a work term and who, in the opinion of the School, can benefit from a remedial program, may be permitted an extension of time not to exceed the end of the registration period of the subsequent semester to complete the requirements of the work term.
- A student who is denied promotion as a result of grades received in HKR and non-HKR courses will be required to repeat all HKR courses in which they obtained a numeric grade of less than 60% in that term. A non-HKR course may be replaced by a course acceptable in the student's program.
- A student with Promotion Denied status at the end of the final academic term will not be recommended for graduation until the student's status is changed to Clear Promotion.

## 5.3 Other Information

- The Committee on Undergraduate Studies will determine each student's promotion status at the end of each term and will make its recommendations to Academic Council.
- Academic Council may promote a student notwithstanding the promotion regulations given above. A decision of this nature will be made only for reasons acceptable to Academic Council and in the case of a student thought likely to succeed in future terms.
- A student shall be permitted only one readmission to the School.
- Students may be required to withdraw from their program at any time, if, in the opinion of the School, they are unlikely to benefit from continued attendance.

## 6 Waiver of School Regulations

Every student has the right to request waiver of School regulations. Students wishing waiver of University academic regulations should refer to **UNIVERSITY REGULATIONS - General Academic Regulations (Undergraduate) - Waiver of Regulations**.

### 6.1 General Information

- The School reserves the right in special circumstances to modify, alter, or waive any School regulation in its application to individual students where merit and equity so warrant in the judgment of the Committee on Undergraduate Studies of the School.
- All requests, other than requests for waiver of a prerequisite or co-requisite of a School course, must be submitted to the Committee on Undergraduate Studies of the School for consideration. Waiver of a School course prerequisite or co-requisite may be granted by the course instructor.

- Students requesting a waiver of a School regulation, other than requests for waiver of a prerequisite or co-requisite of a School course, must submit their request in writing to the Chair of the Committee on Undergraduate Studies on the prescribed form which is available from the School's general office. Medical and/or other documentation to substantiate the request must be provided.
- Any waiver granted does not reduce the total number of credit hours required for the degree.
- In addition, regardless of any waiver granted, students enrolled in a co-operative program must successfully complete a minimum of two work terms.

## 7 Appeal of Regulations

Any student whose request for waiver of School regulations has been denied has the right to appeal. For further information refer to **UNIVERSITY REGULATIONS - General Academic Regulations (Undergraduate) - Appeal of Regulations**.

## 8 HKR Courses Available to Students Not Enrolled in a Program Offered By the School

### 8.1 Regulations for Students Not in a Program Offered By the School

- Students not in a program offered by the School may register for a maximum of 15 credit hours only from the following list if space is available.
- Students who have been required to withdraw from a program offered by the School may not register for any HKR course.
- Students not in a School program will be required to drop any HKR course(s) in excess of 15 credit hours and may be subject to academic and financial penalties.

### 8.2 HKR Courses

1000 Fitness and Wellness  
 1001 Resistance Training for Health and Activity  
 2000 Introduction to Kinesiology, Physical Education and Recreation  
 2002 Coaching  
 2300 Growth and Development  
 2310 Human Anatomy  
 2320 Primary Human Physiology  
 2410 Historical and Comparative Physical Education  
 2505 Recreation Programming and Evaluation  
 2515 Social Psychology of Leisure  
 2545 Introduction to Outdoor Recreation and Education  
 2585 Recreation and Persons with Disabilities  
 2600 Introduction to Human Nutrition  
 2601 Physical Activity, Obesity, and Weight Control  
 3002 Advanced Coaching  
 3310 Physiology of Exercise  
 3360 Care and Prevention of Athletic Injuries  
 3410 Sociology of Sport  
 3490 Women in Sport and Physical Activity  
 3505 Adventure Programming  
 3515 Outdoor Recreation and Persons with Disabilities  
 3525 Canadian Recreation Delivery Systems  
 3535 Legal Aspects of Leisure and Recreation Services  
 3545 Outdoor Recreation Leadership  
 3595 Women and Leisure

## 9 Course Descriptions

In accordance with Senate's *Policy Regarding Inactive Courses*, the course descriptions for courses which have not been offered in the previous three academic years and which are not scheduled to be offered in the current academic year have been removed from the following listing. For information about any of these inactive courses, please contact the Director of the School.

All courses of the School are designated by HKR. The abbreviations KIN, PHSD, and RECR indicate former Kinesiology, Physical Education, and Recreation courses.

**1000 Fitness and Wellness** (formerly PHSD 1000) is an introduction to the concepts of fitness and wellness, and the relationships among physical activity, fitness, wellness, quality of life, and longevity.

CR: PHSD 1000

UL: not applicable towards any of the degrees offered by the School

**1001 Resistance Training for Health and Activity** (formerly KIN and PHSD 1001) is an introduction to resistance training exercises, programs, and principles. This will necessitate both theoretical classes and practical laboratories that will involve testing and participation in resistance training activities. A portion of the assessment will also be based on regular attendance (at student convenience) for another hour of resistance training per week certified by the attending fitness consultant.

CR: KIN and PHSD 1001; HKR 4320; the former KIN and PHSD 4320

LH: 2

UL: not applicable towards any of the kinesiology or physical education degrees offered by the School

**1123 Professional Development Seminars** are offered during the Fall semester prior to a student's first work term. These seminars introduce the co-operative education process and prepare the student for work terms. These seminars are graded PAS or FAL based on attendance and participation.

AR: attendance is required

LC: as scheduled

**2000 Introduction to Kinesiology, Physical Education and Recreation** (formerly KIN, PHSD, and RECR 2000) introduces the philosophical, scientific, socio-cultural, historical concepts, and influences in kinesiology, physical education, and recreation.

CR: KIN, PHSD, and RECR 2000; HKR 2001

**2001 Introduction to Physical Education for Education Students** provides students a general overview of the role that physical education and active living play in the overall development of primary and elementary students, and in the creation of positive learning environment in schools. This course is intended for students in the primary/elementary program offered by the Faculty of Education.

CR: HKR, KIN, PHSD, and RECR 2000

PR: admission to the Bachelor of Education (Primary/Elementary) offered by the Faculty of Education

UL: not applicable towards any of the degrees offered by the School

**2002 Coaching** (formerly KIN and PHSD 2002) introduces the various methods, principles, and theories used to coach developing athletes in various sport settings. Factors such as the coach's role, planning, analysing and developing skills, sport safety, and physical preparation will be presented with an emphasis on attaining competency in these areas.

CR: KIN and PHSD 2002; the former PHSD 421A/B

**2004 Enhancing Performance in Physical Activity** (formerly PHSD 2004) gives an overview of the various models, principles, and theories used to explain and predict ways in which athletes and exercisers conduct themselves in various sport settings. Selected intervention techniques to enhance performance will be presented.

CR: PHSD 2004

**2005 Personal Stress Management** is designed to provide students with an introduction to stress and to explore the relationship between exercise, fitness and physical activity and stress management. It describes how to reorganize one's life by presenting a systematic analysis of stress and coping mechanisms appropriate to different stages of life. The stress coping mechanisms will be presented with an emphasis on application. Completion of this course does not qualify students as stress management counsellors. Students interested in this field are advised to contact the Department of Psychology for information on careers in counselling.

CO: Psychology 1000 and 1001

PR: Psychology 1000 and 1001

**2100 Introduction to Organization and Administration** (formerly PHSD and RECR 2100) introduces the basic administrative functions in a work setting in physical education and/or recreation. The laboratory sessions will assist students to develop skill in the basic computer applications relevant to these functions.

CR: PHSD and RECR 2100

LH: 2

**2210 Physical Activities Course: Movement Concepts** (formerly PHSD 2210) employs the conceptual approach to teaching physical activity and facilitated through various forms of dance (e.g., creative, folk). Concepts, skills, and strategies will be emphasized.

AR: attendance is required. Students who are absent more than six class hours may be required to withdraw from the course and will receive a letter grade of DRF and a numeric grade of

CR: PHSD 2210

LC: as scheduled

LH: as scheduled

**2220 Physical Activities Course: Gymnastics and Aquatics** (formerly PHSD 2220) may employ a number of teaching methods. Emphasis will be placed on the language and practice of the conceptual approach. Concepts, skills, and strategies will be emphasized.

AR: attendance is required. Students who are absent more than six class hours may be required to withdraw from the course and will receive a letter grade of DRF and a numeric grade of

CR: PHSD 2220

LC: as scheduled

LH: as scheduled

PR: HKR 2210

**2300 Growth and Development** (formerly PHSD 2120, and KIN and PHSD 2300) is an introductory study of human growth and developmental factors and their influence on the learning of motor skills.

CR: PHSD 2120; KIN and PHSD 2300

**2310 Human Anatomy** (formerly KIN and PHSD 2310) is a study of the structure of the human body with emphasis on selected systems (endocrine, neural, muscular, skeletal, cardiovascular, respiratory).

CR: KIN and PHSD 2310

LH: 2

**2320 Primary Human Physiology** (formerly KIN and PHSD 2320) is a study of bodily functions with emphasis of selected systems (endocrine, neural, muscular, cardiovascular, respiratory).

CR: KIN and PHSD 2320

LH: 2

**2410 Historical and Comparative Physical Education** (formerly KIN and PHSD 2410) is a history of the development of physical education and sport from ancient societies to modern times.

CR: KIN and PHSD 2410

**2420 Doping in Sport** provides an introduction to the technical and sporting issues surrounding the use of prohibited substances or methods (doping) in sport. The course focuses on the history of doping and anti-doping activities, the moral/ethical issues surrounding the use of performance enhancing drugs and methods, the technical and legal issues surrounding doping control, issues related to therapeutic use exceptions, and the application of strict liability standards to special athletic populations.

**2505 Recreation Programming and Evaluation** (formerly RECR 2505) introduces the student to a variety of methodologies, skills, and materials for planning, developing, implementing, and evaluating professional recreation programs for diverse populations in a variety of settings.

CR: RECR 2505

**2515 Social Psychology of Leisure** (formerly RECR 2515) introduces the personality and social factors that shape how people experience leisure. Course materials will focus on life cycle theory, intrinsic and extrinsic motivation, perceived freedom, constraints theory, and other social psychological theory related to leisure.

CR: RECR 2515

**2545 Introduction to Outdoor Recreation and Education** (formerly RECR 2545) gives an overview of the foundational principles of outdoor education and recreation as they pertain to philosophy, wilderness ethics, professional preparation, movement through wildlands, environmental hazards, navigation, and safety. Students will participate in a sampling of outdoor education and recreation activities during the course.

CR: RECR 2545

PR: HKR 2505

**2585 Foundations of Therapeutic Recreation** is designed to examine a variety of aspects of therapeutic recreation from both a practical and theoretical perspective. Topics will include the history, philosophies, and theories underlying therapeutic recreation, therapeutic recreation models, essential skills for the therapeutic recreationist and ethical considerations for therapeutic recreation. Diverse groups (e.g. adults, youth, disadvantaged and disabled) and settings (e.g. community, schools, institutions, and workplace) suitable for therapeutic recreation will be discussed.

CR: the former HKR and RECR 3585

**2600 Introduction to Human Nutrition** (formerly KIN 2600; same as Biochemistry 2600) gives an overview of human nutrition with an emphasis on topics of current interest. Students will gain an understanding of nutrition in the context of health maintenance across the life span. Topics covered will include nutrition during pregnancy, nutrition for infants, Canadian Recommended Nutrient Intake/Dietary Reference Intake, weight loss and weight gain, nutraceuticals, and ergogenic aids.

CR: KIN 2600; Biochemistry 2600

**2601 Physical Activity, Obesity, and Weight Control** explores the relationship between physical activity, obesity, and morbidity. Emphasis will be placed on the incidence and prevalence of obesity, environmental and genetic factors affecting obesity, and mechanisms of weight and body composition modification.

**2703 Introduction to Human Factors** (formerly KIN 2703) is an introduction to the field of human factors, the field that studies aspects of human movement, health, safety, and performance in the workplace. This will include an introduction to the methods of detection, evaluation, and the physiological changes arising from hazards (e.g. inappropriate levels of noise, vibration, and illumination) in the workplace. The course will also examine overuse injuries in workplace studied in the context of basic biomechanics and function of the musculo-skeletal system.

CO: HKR 2320 and Physics 1020

CR: KIN 2703

PR: HKR 2310, Chemistry 1010 and 1011 or Chemistry 1050 and 1051

**299W Work Term 1** (formerly KIN, PHSD, and RECR 001W) offers an opportunity for students to learn, develop, and practice high standards of professional behavior and performance in the work environment. A student is required to submit a personal job diary and a work term report which should, at a minimum, reflect a clear understanding of job events and work place expectations and show reasonable competence in written communication skills.

CR: KIN, PHSD, and RECR 001W

PR: HKR 1123

**3002 Advanced Coaching** (formerly KIN and PHSD 3002) is an advanced study of the various methods, principles, and theories used to coach athletes in various sport settings. Topics such as planning, the coach's role, analysing, and developing skills, mental training, physical preparation, and development of a personal coaching plan will be studied with an emphasis on attaining competency in these areas. Practical coaching experience is a required component of the course.

CR: KIN and PHSD 3002; PHSD 421A/B

LH: 3 Students will participate in practical coaching situations from which coaching journals will be developed for course evaluation

PR: HKR 2002

**3110 Curriculum Development and Teaching Methods** (formerly PHSD 2110, 3110, and 311A/B) gives an overview, through a blend of theory and practical experience, of curriculum development and teaching methods as they apply to primary/elementary level physical education

CH: 6

CO: HKR 3300

CR: PHSD 2110, 3110, 311A/B

LH: 9

PR: HKR 2000, 2210, 2300, 2310, 2320 and 3340



**3210 Physical Activities Course: Court Games** (formerly PHSD 3210) covers volleyball, tennis, badminton, plus a selection of other court games. Individual activities include track and field, wrestling, and other combative activities. A number of teaching methods may be employed and emphasis will be placed on the language and practice of the conceptual approach. Concepts, skills, and strategies will be emphasized.

AR: attendance is required. Students who are absent more than six class hours may be required to withdraw from the course and will receive a letter grade of DRF and a numeric grade of

CR: PHSD 3210  
LC: as scheduled  
LH: as scheduled  
PR: HKR 2210

**3220 Physical Activities Course: Target and Field Games** (formerly PHSD 3220) covers golf, archery, softball. Outdoor activities, including canoeing, navigational skills, lightweight camping, over-night canoe trip, and introduction to rock climbing, are offered only in the Fall. A number of teaching methods may be employed and emphasis will be placed on the language and practice of the conceptual approach. Concepts, skills, and strategies will be emphasized.

AR: attendance is required. Students who are absent more than six class hours may be required to withdraw from the course and will receive a letter grade of DRF and a numeric grade of

CR: PHSD 3220  
LC: as scheduled  
LH: as scheduled  
PR: HKR 2210

**3221 Wilderness First Aid for Outdoor Leaders** provides a minimum standard for outdoor professionals, guides and instructors who work in a wilderness setting. Course content extends beyond urban-based first aid programs to include elements inherent in leading groups in the outdoors and guiding wilderness adventures. Special emphasis is placed on prevention of injuries, accident scene management, leadership, leader responsibility and liability, advanced first aid kits, wound management and managing the trauma victim. CPR is included in this course.

**3300 Motor Learning** (formerly PHSD 2120, and KIN and PHSD 3300) gives an overview of motor learning and performance variables and their application to the teaching of physical skills, and will investigate motor control issues related to skill instruction.

CR: PHSD 2120; KIN and PHSD 3300  
LH: 2  
PR: HKR 2300

**3310 Physiology of Exercise** (formerly KIN and PHSD 3310) covers the physiological responses of the metabolic, neuromuscular, and cardiorespiratory systems at rest and during acute and chronic activity.

CR: KIN and PHSD 3310  
LH: 3  
PR: HKR 2310 and 2320; or Biochemistry 311A and 311B; or Nursing 1002 and 1012; or Pharmacy 3201 and 3202

**3320 Introduction to Biomechanics** (formerly KIN and PHSD 3320) is the analysis of human movement; the mechanics of motion and the general application of kinesiology.

CO: HKR 2320  
CR: KIN and PHSD 3320  
LH: 2

PR: HKR 2310 It is strongly recommended that students successfully complete Physics 1020 prior to enrolling in this course

**3330 Health Issues I** (formerly KIN and PHSD 3330) covers issues in personal and community health related to infectious illness, degenerative illness, heredity, and nutrition.

CR: KIN and PHSD 3330

**3340 Adapted Physical Activity** (formerly KIN, PHSD, and RECR 3340) presents an overview of current practices, philosophies, and issues related to physical activity and recreation for persons with disabilities. Knowledge and understanding of various disabling conditions and consequent needs of persons with disabilities, including health, safety and fitness, and how these needs may be met in terms of physical activity will be emphasized.

CR: KIN, PHSD, and RECR 3340

**3350 Health Issues II** - inactive course.

**3360 Care and Prevention of Athletic Injuries** (formerly KIN and PHSD 3360) is a basic introduction to the field of athletic therapy and sports medicine. The content focuses on the prevention and care of sports injuries and covers topics such as preventive screening, safe environments, on the spot assessment and First Aid, legal responsibility, and supportive taping/wrapping.

CR: KIN and PHSD 3360  
PR: HKR 2310 and a Basic First Aid Course

**3410 Sociology of Sport** (formerly KIN and PHSD 3410; same as Sociology 3410) is an analysis of functions of sport in Canadian and North American society. Areas include social organization of sport, sport and

social processes, sport and social problems, socialization and stratification of sport, and violence in sport.

CR: KIN and PHSD 3410; Sociology 3410

**3485 Therapeutic Recreation Service Delivery** focuses on issues related to the delivery of therapeutic recreation services. In particular, the following topics will be addressed: documentation in therapeutic recreation; client assessment issues; therapeutic recreation program planning (identifying client needs, selecting appropriate interventions, task and activity analysis, planning change-oriented programs, writing behavioural objectives, etc.); program and client evaluation; written plans of operation.

PR: HKR 2585 and HKR 2505

**3490 Women in Sport and Physical Activity** (formerly PHSD 3490, and PHSD and RECR 3590) provides students with an opportunity to critically examine, understand and appreciate women's involvement in and contributions to the areas of sport and physical activity. The student will be expected to analyze, synthesize, and evaluate a wide range of historical, cultural, philosophical, and socio-psychological issues that have shaped the nature and scope of women's participation in sport and physical activity.

CR: PHSD 3490; PHSD and RECR 3590

**3505 Adventure Programming** (formerly RECR 3505) introduces the theory and practice of adventure programming. Topics covered in the course will include briefing, activity selection, sequencing, group development, and risk management. The use of adventure programming with a variety of populations will be explored. Skill development in adventure activity facilitation and processing is stressed throughout the course.

CR: RECR 3505  
PR: HKR 2505 or permission of the instructor

**3515 Outdoor Recreation and Persons with Disabilities** - inactive course.

**3525 Canadian Recreation Delivery Systems** (formerly PHSD 3520, RECR 3525, and PHSD 4520) introduces recreation and sport delivery systems in Newfoundland and Canada. The course will examine the various agencies that administer recreation and sport at municipal, provincial, and national levels.

CR: PHSD 3520; RECR 3525; PHSD 4520  
PR: HKR 2000

**3535 Legal Aspects of Leisure and Recreation Services** (formerly RECR 3535) provides students with an opportunity for in-depth study of legal issues related to the operation of leisure services and facilities. Issues of tort and contract liability, employment related legal aspects, human rights and freedoms, and administrative procedures involved in property acquisition, law enforcement, and risk management are the topics of this course.

CR: RECR 3535

**3545 Outdoor Recreation Leadership** (formerly RECR 3545) acquaints students with the breadth, depth, and scope of outdoor recreation leadership including a detailed examination of theories, principles, and practices. The course provides opportunities for individual students to develop, practice, and receive feedback on their outdoor leadership skills. The course includes a required field experience in outdoor recreation leadership.

CR: RECR 3545  
PR: HKR 2505 or HKR 3220

**3555 Outdoor Recreation Management** (formerly PHSD 3550 and RECR 3555) gives an overview of outdoor recreation practices in Newfoundland and Canada. This course will examine the management of resources, conservation education and practices, and development for public use or exclusion; legislation related to management of risk; viability of facilities; national and provincial agencies; private commercial ventures; and future trends in management. Management strategies will form a major part of the course.

CR: PHSD 3550; RECR 3555

**3565 Tourism/Commercial Recreation** (formerly PHSD 3560 and RECR 3565) examines behavioral factors influencing tourism; promotion of commercial recreation attractions, provincial strategies in travel and tourism, problems of leisure travel, stability of entrepreneurial ventures in tourism, and research and planning strategies relevant to commercial ventures.

CR: PHSD 3560; RECR 3565

**3575 Community Development and Recreation** (formerly RECR 3575) introduces various theoretical perspectives on community organization and development, as well as methods available to the recreation practitioner to facilitate the development of recreation services in communities. This course examines, in particular, recreation services delivery which involves community residents and groups in recreation program decision-making and implementation.

CR: RECR 3575

**3595 Women and Leisure** (formerly PHSD and RECR 3590, and RECR 3595) provides students with an opportunity to critically examine, understand and appreciate women's involvement in and contributions to leisure. The student will be expected to analyze, synthesize, and evaluate a wide range of historical, cultural, philosophical, and socio-psychological issues that have shaped the nature and scope of women's participation in leisure.

CR: PHSD and RECR 3590; RECR 3595  
PR: Sociology 1000 or Sociology 2000

**399W Work Term 2** (formerly KIN, PHSD, and RECR 002W) offers an opportunity for students to further expand and develop professional knowledge and skills, while demonstrating the ability to accept increased responsibility and challenge in the work place. A student is expected to demonstrate competence in written communication skills through the maintenance of a personal job diary and the submission of a formal report demonstrating the student's ability to effectively gather, analyse, organize, and present information regarding a specific aspect of the work term position.

CR: KIN, PHSD, and RECR 002W  
PR: HKR 1123 and successful completion of 299W

**4210 Physical Activities Course: Territorial Games 1** (formerly PHSD 4210) includes ice hockey, water polo, team handball. Outdoor activities such as snow travel methods emphasizing cross-country skiing, navigational skills, winter survival/camping, and overnight camping are offered only during the Winter. A number of teaching methods may be employed and emphasis will be placed on the language and practice of the conceptual approach. Concepts, skills, and strategies will be emphasized.

AR: attendance is required. Students who are absent more than six class hours may be required to withdraw from the course and will receive a letter grade of DRF and a numeric grade of

CR: PHSD 4210  
LC: as scheduled  
PR: HKR 2210

**4220 Physical Activities Course: Territorial Games 2** (formerly PHSD 4220) includes soccer and rugby, basketball and other territorial games. A number of teaching methods may be employed and emphasis will be placed on the language and practice of the conceptual approach. Concepts, skills, and strategies will be emphasized.

AR: attendance is required. Students who are absent more than six class hours may be required to withdraw from the course and will receive a letter grade of DRF and a numeric grade of

CR: PHSD 4220  
LC: as scheduled  
LH: as scheduled  
PR: HKR 2210

**4310 Evaluation** (formerly KIN and PHSD 4310) includes program evaluation and measurement of the components of physical performance in addition to statistical treatment and interpretation of data.

CR: KIN and PHSD 4310  
LH: 2  
PR: Statistics 2500 or equivalent

**4320 Fitness Leadership** (formerly KIN and PHSD 4320) prepares professionals in the administrative, interpretive, instructional, interpersonal, and pedagogic competencies required for and associated with fitness testing, prescription, teaching, and leadership.

CO: HKR 3310  
CR: HKR 1001, the former KIN and PHSD 1001; KIN and PHSD 4320

**4330 Social Psychology of Sport, Physical Activity and Recreation** (formerly KIN and PHSD 4330) introduces the psychological factors that influence participation in sport, exercise, physical activity and recreation and the psychological effects derived from participation.

CR: KIN and PHSD 4330

**4420 Issues** (formerly KIN and PHSD 4420) explores, through research and discussion, trends and issues basic to the profession including areas in physical education, health, fitness, and lifestyle industries.

CR: KIN and PHSD 4420  
PR: successful completion of a minimum of 78 credit hours

**4485 Leisure Education in Therapeutic Recreation Settings** is designed to provide students with the knowledge and skills required to facilitate leisure education interventions designed to bring about desired changes in the leisure behaviour of individuals. The course will address the following three broad areas: a) concepts and models of leisure education; b) content related to specific skills required for leisure involvement (leisure awareness, social skills development, friendship development, stress management, assertiveness, decision making, etc.) and c) instructional and interactional techniques used in leisure education.

PR: HKR 2585 and HKR 2505

**4515 Principles and Practices of Social Recreation** - inactive course.

**4525 Planning for Recreation** (formerly RECR 4525) focuses on the strategic planning process and how it can be used within recreation organizations. The course is designed to introduce students to various planning theories and to provide students with opportunities to develop skills in strategic and other planning processes.

CR: RECR 4525

**4535 Camp Administration and Programming** (formerly PHSD 4530 and RECR 4535) focuses on the organization of residence and mobile camps,

camp ownership, site, property, buildings, health and safety, staff recruitment, budget, programming, operation, and evaluation.

CR: PHSD 4530; RECR 4535

**4545 Facility Planning, Design and Management** (formerly PHSD 4540 and RECR 4545) focuses on the major considerations in selecting site, size, type and usage of the more popular facilities as well as the problems in design, layout and function, standards, and modifications.

CR: PHSD 4540; RECR 4545

**4555 Leadership and Supervision in Recreation** (formerly PHSD 4550 and RECR 4555) focuses on need, selection, training, and supervision of leaders in recreation. Certification, standards and professional organizations. Evaluation of leadership materials and methods used. Practical exposure to roles of both leader and supervisor through seminar and related fieldwork.

CR: PHSD 4550; RECR 4555

**4565 Recreation Promotion and Marketing** (same as PHSD 4560 and RECR 4565) examines the communication processes, marketing strategies, and evaluative methods that enable an agency to promote its products, programs, and services.

CR: PHSD 4560; RECR 4565

**4575 Recreation Ethics, Issues and Trends** (formerly PHSD 4570 and RECR 4575) explores contemporary trends and issues identified by governments and recreation practitioners and the way in which these issues influence the delivery of leisure services.

CR: PHSD 4570; RECR 4575

**4585 Financing Recreation Services** (formerly RECR 4585) provides opportunities for in-depth study of financing leisure services in a variety of settings. The primary learning objectives are to achieve an understanding of revenue sources, financial management, and budgeting, the concepts of equity from a justice, social, and economic perspective, and the ability to use various techniques in the allocation of resources, the pricing of services, and ascertaining the costs of providing services.

CR: RECR 4585

**4600 Introduction to Research** (formerly KIN, PHSD, and RECR 4600) introduces research methodologies currently employed in kinesiology, physical education or recreation.

CR: KIN, PHSD, and RECR 4600  
PR: Statistics 2550 or equivalent

**4605 Research Methods in Recreation and Leisure II** - inactive course.

**4610 Research Project** (formerly KIN, PHSD, and RECR 4610) is a detailed study for honours students in Kinesiology, Physical Education and Recreation, directed by a faculty member of the School, of a selected topic in the field of kinesiology, physical education or recreation.

CR: KIN, PHSD, and RECR 4610  
PR: HKR 4310, a minimum of 75% in HKR 4600 and one of Statistics 2500 or Statistics 2550

**4625 Theoretical Perspectives of Recreation and Leisure** (formerly RECR 4625) is an in-depth overview and analysis of current theoretical perspectives/paradigms related to the leisure experience. A parallel purpose is to examine psychological, sociological, and social-psychological constructs that contribute to a contemporary, interdisciplinary understanding of recreation and leisure.

CR: RECR 4625

**4635 Multicultural Perspectives of Recreation and Leisure** (formerly RECR 4635) is a cross-cultural analysis of recreation and leisure and their relationship to culture. Emphasis will be placed on understanding the interrelationships of the social, physical, psychological, economic, and political aspects of leisure and recreation in various cultures.

CR: RECR 4635

**4685 Professional Issues in Therapeutic Recreation** is designed to facilitate an in-depth exploration and analysis of philosophical issues and interdisciplinary theories and to discuss how they relate to therapeutic recreation practice and research. The course will be conducted as a seminar and students will be responsible for reading course materials and leading discussions on various topics. The ultimate goal of the course is to prepare the student to enter the profession confident in his/her ability to provide exemplary TR services.

PR: HKR 2585 and HKR 2505

**4700 Advanced Fitness Training and Assessment** (formerly KIN 4700) prepares students to assess, prescribe, demonstrate, supervise, educate, and counsel apparently healthy individuals across the lifespan on information related to physical activity/exercise, fitness and health. The successful completion of this course will allow students to apply for a certification as a Professional Fitness and Lifestyle Consultant from the Canadian Society of Exercise Physiology.

CR: KIN 4700  
LH: 2  
PR: HKR 4320

**4701 Environmental Physiology** (formerly KIN 4701) examines human behavioral, autonomic and metabolic responses to extreme environments. This will include the study of human responses seen during changes from normal ambient temperature and pressure, to those experienced in the environments encountered during undersea diving, space travel, altitude, and other similar environments.

CR: KIN 4701  
PR: HKR 2320

**4702 Advanced Exercise Physiology** (formerly KIN 4702) prepares students to acquire the knowledge necessary to understand, analyse, and integrate information and experiences related to physiological adaptations occurring with acute and chronic activity and disuse.

CR: KIN 4702

LH: 2  
PR: HKR 3310

**4703 Occupational Ergonomics and Sport Biomechanics** (formerly KIN 4703) focuses on the contrast between biomechanical analyses of workplace tasks and athletic movement. Students will conduct a detailed biomechanical analysis of a given movement, in the workplace or for a given sport, with regard to both the probability of injury and optimization of performance.

CR: KIN 4703

LH: 2  
PR: HKR 2703, 3320, and Physics 1020

**4720 Directed Study** (formerly KIN 4720) requires approval of Director of the School and the course instructor. Permission to register must be obtained in the term preceding enrolment.

CR: KIN 4720

**4910 Directed Study** (formerly PHSD 4910) requires approval of Director of the School and the course instructor. Permission to register must be obtained in the term preceding enrolment.

CR: PHSD 4910

**4915 Directed Study** (formerly RECR 4915) requires approval of Director of the School and the course instructor. Permission to register must be obtained in the term preceding enrolment.

CR: RECR 4915

**499W Work Term 3** (formerly KIN, PHSD, and RECR 003W) offers an opportunity for students, who have sufficient academic grounding and work experience, to exercise greater independence and responsibility in their assigned work. A student must demonstrate a high level of competency in communications skills through the submission of a formal report on a topic related to the work term or through a formal presentation on an aspect of the work term using the latest in computer technology and applications.

CR: KIN, PHSD, and RECR 003W

PR: HKR 1123 and successful completion of 399W

Archived Previous Calendar  
Current University Calendar available at  
[mun.ca/university-calendar](http://mun.ca/university-calendar)

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Current University Calendar available at  
mun.ca/university-calendar

*FACULTY OF MEDICINE*

# FACULTY OF MEDICINE

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*N.B. Designation "Clinical" indicates a part-time appointment.*

#### **Dean of Medicine**

Rourke, J.T.B., M.D. *Western*, CCFP(EM), FCFP, M.Clin.Sc.(FM)

#### **Dean Emeritus**

Rusted, I.E., B.A. *Toronto*, M.Sc. *McGill*, M.D., C.M. *Dalhousie*,  
FRCPC, F.A.C.P.

#### **Vice Dean**

Peters, S., M.D. *Memorial*, FRCPC

#### **Associate Dean for Basic Medical Sciences**

Mearow, K.M., B.Sc., M.Sc. *Brock*, Ph.D. *McMaster*

#### **Acting Associate Dean for Community Health**

West, R., M.Sc., Ph.D. *McGill*

#### **Assistant Dean for Admissions**

Barter, J., M.D. *Memorial*, FRCPC, FAAP

#### **Assistant Deans for Post-Graduate Medical Education**

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FRCPC

Vardy, C., B.Sc., M.D. *Memorial*, FRCPC

#### **Assistant Dean for Research and Graduate Studies (Medicine)**

Moody-Corbett, F., B.Sc. *Dalhousie*, M.A. *New Brunswick*, M.Sc.,  
Ph.D. *McGill*

#### **Assistant Dean for Student Affairs**

Harris, J.A., B.Sc., M.D., B.P.E. *Memorial*

#### **Assistant Dean for Undergraduate Medical Education**

Wells, M., B.Sc.(Chem), B.Med.Sc., M.D. *Memorial*, FRCSC

### **BASIC MEDICAL SCIENCES**

#### **Professors Emeriti**

Allderdice, P., M.A. *Chicago*, M.S. *Utah*, Ph.D. *Montana*

Bieger, D., M.D., Ph.D. *Kiel*

Orr, J.C., B.Sc. *London*, Ph.D. *Glasgow*, A.R.C.S.

Roberts, K.B., M.A., D.Phil. *Oxon*, M.B., B.S. *London*, L.R.C.P.,  
M.R.C.S.; Professor of Physiology

Tomlinson, J.D.W., M.A., M.B., B.Chir. *Cambridge*; Professor of  
Anatomy

#### **Professor of Anatomy**

McLean, J., B.Sc. *New Brunswick*, Ph.D. *Dalhousie*

#### **Associate Professors of Anatomy**

Chandra, S., M.B., B.S. *New Delhi*

Harris, J.A., B.Sc., B.Med.Sc., M.D., B.P.E. *Memorial*, Dip.  
Med.Ed. *Dundee*

#### **Cross Appointed from Biochemistry**

Brosnan, J.T., B.Sc.(Hons.), M.Sc. *National University of Ireland*,  
D.Phil. *Oxford*; University Research Professor, Awarded 1990;  
CIHR Senior Investigator

Brosnan, M.E., B.A.(Hons.), M.Sc., Ph.D. *Toronto*

Kaur, S., B.Sc. *Punjab*, M.Sc. *Punjab Agricultural*, Ph.D. *Post  
Graduate Institute of Medical Education and Research*; CIHR  
New Investigator

#### **Professor of Molecular Biology**

Michalski, C.J., B.S., M.S. *Michigan State*, Ph.D. *North Carolina*

#### **Professor of Molecular Biology and Microbiology**

Pater, A., B.Sc. *British Columbia*, M.Sc. *Sask.*, Ph.D. *McMaster*

#### **Professor of Neuro/Molecular Biology**

Mearow, K.M., B.Sc., M.Sc. *Brock*, Ph.D. *McMaster*

#### **Professor of Molecular Virology and Medicine (Hepatology)**

Michalak, T.I., M.D., Ph.D. *Warsaw*; Cross appointment to  
Laboratory Medicine

#### **Associate Professor of Cell Sciences**

Green, R., B.Sc., Ph.D. *Birmingham*; Joint appointment with  
Genetics

#### **Associate Professors of Immunology**

Drover, S., M.Sc., Ph.D. *Memorial*

Grant, M., B.Sc., M.Sc. *British Columbia*, Ph.D. *McMaster*; Joint  
appointment with Laboratory Medicine

#### **Professor of Endocrinology**

Carayanniotis, G., B.Sc. *Patras*, Ph.D. *Toronto*; Joint appointment  
with Medicine

#### **Professors of Oncology**

Church, J., B.Sc.(Hons.) *Queen's*, M.Sc., Ph.D. *Toronto*

Gillespie, L.L., B.Sc., Ph.D. *Ottawa*

Kao, K.R., B.Sc., M.Sc., Ph.D. *Toronto*

Paterno, G.D., B.Sc., M.Sc. *Toronto*, Ph.D. *Ottawa*

#### **Associate Professor of Cancer/Cardiovascular Biology**

Gendron, R., B.Sc., Ph.D. *McGill*

#### **Associate Professor of Vascular Molecular Biology/Pediatric Cancers**

Paradis, H., B.Sc., Ph.D. *Montreal*

#### **Assistant Professor of Cell Biology**

Doré, J., B.Sc. *UBC*, M.S. *Florida*, Ph.D. *Tennessee*

#### **Professor of Pharmacology**

Neuman, R., B.A. *San Francisco State*, Ph.D. *Alberta*; Cross  
Appointment to Pharmacy

#### **Professor of Pharmacology (Cardiovascular)**

Tabrizchi, R., B.Sc.(Hons.) *Sunderland*, M.Sc., Ph.D. *British  
Columbia*

#### **Associate Professor (Neuroscience)**

Kirouac, G.J., B.S., M.Sc., Ph.D. *Manitoba*; Cross appointment to  
Psychiatry

#### **Professor of Physiology (Neurosciences)**

Corbett, D., B.A. *Dalhousie*, M.Sc. *Memorial*, Ph.D. *Concordia*

#### **Professors of Physiology**

Hansen, P.A., B.Sc., M.S. *Akron*, Ph.D. *Memorial*; Winner of the  
President's Award for Distinguished Teaching, 1990-1991

Moody-Corbett, F., B.Sc. *Dalhousie*, M.A. *New Brunswick*, M.Sc.,  
Ph.D. *McGill*

McKay, D., B.Sc., M.S., Ph.D. *Michigan State*

#### **Assistant Professor of Cardiovascular Sciences**

McGuire, J.J., B.Sc.(Hons.), Ph.D. *Queen's University of Kingston*

#### **Assistant Professor of Reproductive and Cell**

#### **Biology/Physiology**

MacPhee, D., B.Sc.(Hons.) *Prince Edward Island*, Ph.D. *Western  
Ontario*

#### **Assistant Professors of Basic Medical Sciences**

Hirasawa, K., Bc.D., Ph.D. *Tokyo*

Hirasawa, M., Bc.D., Ph.D. *Tokyo*

#### **Cross Appointed from Psychology**

Harley, C.W., B.Sc., Ph.D. *Oregon*

Malsbury, C., B.A. *Northwestern*, M.A., Ph.D. *McGill*

#### **Cross Appointed from Genetics**

Young, T., Ph.D. *Memorial*

#### **Cross Appointed from Medicine**

Kovacs, C., M.D., B.A. *Queen's*, FRCPC

Vasdev, S.C., B.Sc., M.Sc., Ph.D., D.V.M. *Punjab*

#### **Professor of Cardiovascular/Renal Physiology**

Smeda, J., B.Sc.(Hons.), M.Sc. *Brock*, Ph.D. *McMaster*

Van Vliet, B.N., B.Sc. *Toronto*, Ph.D. *Saskatchewan*

#### **Assistant Professor (Biological Psychiatry)**

Chen, X., M.B. *China*, Ph.D. *Cambridge*; Joint appointment with  
Psychiatry

#### **Associate Professor of Surgery and Basic Medical Science (Oncology Research)**

Richardson, V.J., B.Sc., Ph.D. *Sheffield*; Cross Appointment to  
Pharmacy

#### **Adjunct Professors**

Kutney, J., B.Sc. *Alberta*, M.Sc. *Wisconsin*, Ph.D. *Wayne State*

Mandal, S.K., M.Sc. *Banaras Hindu University*, Ph.D. *Calcutta  
University*

Scott, T.M., B.Sc. *St. Andrews*, Ph.D. *Edinburgh*; Winner of the  
President's Award for Distinguished Teaching, 1995-1996

**CLINICAL SCIENCES****ANESTHESIA****Professor and Chair**

King, F.G., B.Sc., B.Med.Sc., M.D. *Memorial*, FRCPC

**Professor Emeritus**

Henderson, C.U., M.D., C.M. *Dalhousie*, F.A.C.A., FRCPC, F.A.A.P.

**Associate Professors of Anesthesia**

Jamieson, J.W., B.Sc., M.D. *Memorial*, FRCPC

LeDez, K.M., M.B., Ch.B. *Dundee*, FRCPC

**Assistant Professors of Anesthesia**

Harris, J., B.Sc., M.D. *Memorial*, FRCPC

Howells, S., B.Sc., M.D. *Dalhousie*, FRCPC

Samarasena, L.D.A., M.B., B.S. *Ceylon*, F.F.A.R.C.S. *Ireland*, FRCPC

Tucker, J.H., M.D. *Western*, FRCPC

**Clinical Associate Professor of Anesthesia**

Kamra, C.P., M.B.B.S. *India*, D.A., F.F.A.R.C.S. *England*, F.F.A.R.C.S. *Ireland*, FRCPC

**Clinical Assistant Professors of Anesthesia**

Bautista, M.J., B.Med.Sc., M.D. *Memorial*, FRCPC

Flynn, J.F., B.Sc., M.D. *Memorial*, FRCPC

Forward, R.G., B.Med.Sc., M.D. *Memorial*, FRCPC

Green, R.G., B.Sc., B.Med.Sc., M.D. *Memorial*, FRCPC

Noel, F.D., B.Sc., M.D. *Memorial*, FRCPC

Pridham, J.N., M.D. *Western*, FRCPC

Williams, J.T.L., B.Sc., M.D. *Dalhousie*, FRCPC

**Clinical Lecturers of Anesthesia**

Badrudin, N., M.B., B.S., LRCP, MRCS, F.F.A.R.C.S. *England*

Bolis, R., M.B., B.Ch., M.Sc. *Egypt*

Casey, A.P., B.Med.Sc., M.D. *Memorial*, FRCPC

Clarke, B.A., B.Sc., B.Med.Sc., M.D. *Memorial*, FRCPC

Cowan, G., B.Sc., M.D. *Memorial*, FRCPC

Hughes, B., B.D.S., M.B., B.S. *London*, F.F.A.R.C.S.

Lee, L., M.D. *Taiwan*

Major, A.E., M.D. *Memorial*, FRCPC

O'Leary, S., M.D. *Memorial*, FRCPC

O'Regan, N., M.D. *Dalhousie*

Redmond, E.B., B.Sc., M.D. *Memorial*, FRCPC

Suppiah, N., M.B.B.S. *India*, F.F.A.R.C.S. *Ireland*

**FAMILY MEDICINE****Associate Professor and Chair**

Miller, R., M.D. *Western Ontario*, C.C.F.P., F.C.F.P.

**Professors of Family Medicine**

Bethune, C., M.D. *McMaster*, C.C.F.P., F.C.F.P., M.Cl.Sc. *Western Ontario*; Cross appointment to Counselling Center

Robbins, C., B.Sc., M.B.A. *Memorial*, M.D. *Dalhousie*, C.C.F.P., F.C.F.P.

Rourke, J.T.B., M.D. *Western*, C.C.F.P.(E.M.), F.C.F.P., M.Clin.Sc.(F-M)

Worrall, G., B.Sc., M.B.B.S. *University of London, England*, MRCS, MRCP, C.C.F.P., M.Sc. *McMaster*

**Associate Professors of Family Medicine**

Butler, R., B.Sc., M.D. *Memorial*, C.C.F.P., F.C.F.P.

Duke, P., B.Med.Sc., M.D. *Memorial*, C.C.F.P.

Eaton, W.H., M.D. *Memorial*, C.C.F.P.

Jong, M., M.B.B.S. *Malaya*, M.R.C.P. *U.K.*, C.C.F.P.

MacDonald, S.M., B.Sc.N., M.D. *McMaster*, C.C.F.P.; Joint appointment with Medicine

Moffatt, S.M., B.Sc. *Acadia*, B.A. *New Brunswick*, M.D. *Memorial*, C.C.F.P.

O'Maonaigh, C., M.B., B.Ch., B.A.O., M.P.H. *Ireland*

Parsons, E., B.Med.Sc., M.D. *Memorial*, C.C.F.P.

Parsons, W., M.D. *Memorial*, C.C.F.P.

Ravalia, M., L.R.C.P.(Ed.) *Zimbabwe*, C.C.F.P.

Rourke, L., M.D. *Western*, C.C.F.P., F.C.F.P., M.Clin.Sc.

Tarrant, G.M., B.Med.Sc., M.D. *Memorial*, C.C.F.P., F.C.F.P., C.G.P.P. *Toronto*

**Assistant Professors of Family Medicine**

Broderick, V., M.D. *Memorial*, C.C.F.P.

Brown, G., M.D. *Memorial*, C.C.F.P.-E.M.

Duggan, N., M.D. *Memorial*, C.C.F.P.

Farrell, G., M.D. *Memorial*

Flynn, H., M.D. *Memorial*, C.C.F.P.

Graham, W., M.D. *Memorial*, C.C.F.P.

Morgan, D., M.D. *Memorial*, C.C.F.P.-E.M.

Renouf, T., M.D. *Memorial*, C.C.F.P.-E.M.

Sherman, G.P., B.A. *Cleveland*, M.D. *McGill*, C.C.F.P.

Snow, P., M.D., B.N. *Memorial*, C.C.F.P.

**Clinical Associate Professors of Family Medicine**

Hall, J., M.Sc., M.D. *Memorial*, C.C.F.P.

St. Croix, E., M.D. *Memorial*, F.C.F.P.

**Clinical Assistant Professors of Family Medicine**

Barrowman, B., M.D. *Memorial*, C.C.F.P.

Battcock, N., B.Sc., M.D. *Memorial*, C.C.F.P.

Bowen, J., M.D. *Ottawa*

Costello, T., M.D. *Memorial*, C.C.F.P., F.C.F.P.

Davies, C., M.B., B.Ch., BAD *Dublin*, C.C.F.P., F.C.F.P.

Farmer, R., M.B., B.Ch. *Scotland*, C.C.F.P.

Forsey, R., B.Sc., B.Med.Sc., M.D. *Memorial*, C.C.F.P.

Goodridge, M., M.D. *Memorial*, C.C.F.P.

Hatcher, L., M.D. *Memorial*, C.C.F.P.

Hewitt, D., B.Sc. *McMaster*, M.D. *Ontario*, C.C.F.P.

Hicks, F., B.Sc., M.D. *Memorial*, C.C.F.P.

Howell, O., B.Med.Sc., M.D. *Memorial*, M.Sc. *McGill*, C.C.B.O.M.

Hudson, C., M.D. *Memorial*, C.C.F.P.

Karaivanov, Y., M.D. *Sofia Medical University Bulgaria*, C.C.F.P.

Mayo, E., M.D. *Memorial*, C.C.F.P.

Moulton, W., M.D. *Memorial*

O'Shea, P.M., B.Sc. *St. Francis Xavier*, M.D. *Queen's*, C.C.F.P., F.C.F.P.

Paul, A., M.D. *Memorial*

Perley, M., M.D. *Dalhousie*, C.C.F.P.

Squires, T., B.Med.Sc., M.D. *Memorial*, C.C.F.P.

Taor, R., M.R.C.P., L.R.C.S. *England*, F.R.C.S.

White, J., B.Med.Sc., M.D. *Memorial*, C.C.F.P.

Wilson, S. M.D. *Memorial*

**Clinical Lecturers of Family Medicine**

Ajisafe, O., M.D. *South Africa*, C.C.F.P.

Bannister, E., M.D. *Memorial*

Barter, R., M.D. *Dublin*, R.C.S., L.R.C.P.S.I.

Blackie, P.B., B.A. *Memorial*, M.D. *Dalhousie*, C.C.F.P.

Blagrave, D., M.D. *Dalhousie*

Brewer, J., M.D. *Ottawa*, C.C.F.P.

Brewer, M., M.D. *Dalhousie*, C.C.F.P.

Brien, D., B.Sc., M.D. *Dalhousie*, C.C.F.P.

Button, L., M.D. *Dalhousie*, C.C.F.P., F.C.F.P.

Callahan, P., M.D. *Memorial*, C.C.F.P.

Comeau, L., B.Sc., B.Ed., M.D. *Dalhousie*, C.C.F.P.

Craig, B., B.Sc., M.D. *Dalhousie*

Crocker, P., M.D. *Memorial*, C.C.F.P.

Cutler, M., M.D. *Memorial*, C.C.F.P.

Darcy, S., M.D. *Memorial*, C.C.F.P.

Feltham, I., M.D. *Memorial*, C.C.F.P.

Fitzgerald, C., B.A., M.D. *McMaster*, C.C.F.P.

Goodfellow, M., B.Sc. *St. Dunstan's*, M.D. *Dalhousie*, C.C.F.P.

Grandy, B., M.D. *Memorial*, C.C.F.P.

Higgins, G.A., B.Sc., B.Med.Sc., M.D. *Memorial*, C.C.F.P.

Horwood, K., M.D. *Memorial*, C.C.F.P.

Irfan, M., M.B.B.S. *Sri Lanka*, C.C.F.P.

Jardine, F., M.D. *Memorial*, C.C.F.P.

King, J.F., B.Sc., B.Med.Sc., M.D. *Memorial*, C.C.F.P.

Laurie, A., M.R.C.S., L.R.C.P., D.C.H. *United Kingdom*, C.C.F.P.

Lemire, F., M.D., C.M. *McGill*, C.C.F.P.

MacLeod, S., B.Sc., M.D. *Memorial*, C.C.F.P.

McComiskey, A., M.D. *Ireland*

Mercer, G., M.D. *Memorial*, C.C.F.P.

O'Keefe, M., B.Sc., M.D. *Toronto*, C.C.F.P.

Oldford, J., B.A., M.S.W. *Toronto*

Pearce, B., M.D. *Memorial*

Penney, C., MB, BS *London*

Power, L., M.D. *Memorial*, C.C.F.P.

Rashleigh, D., M.D. *Queen's*

Sequiera, P., M.D. *Memorial*, C.C.F.P.

Stevenson, R., M.D. *Memorial*

Verge, J., M.D. *Memorial*, C.C.F.P.

Woolfrey, J., M.D. *Memorial*, C.C.F.P.

Zigante, N., M.D. *Memorial*, C.C.F.P.

**Cross Appointed from Counselling Center**

Cornish, P., B.Sc., M.A., Ph.D. *Saskatchewan*



Doyle, M., B.Sc.(Hons.) *Memorial*, Med.Ed.D. *Toronto*  
 Hurley, G., B.A. *Colorado College*, M.Sc., Ph.D. *Missouri*

**Cross Appointed from Student Health Services**

Harpur, R., M.B., B.Ch., M.D. *Ireland*

**Cross Appointed from Basic Medical Sciences**

Hoekman, T., A.B. *Hope College*, Ph.D. *Illinois*

**Cross Appointed from Community Health**

Bavington, B., M.D. *Toronto*, M.P.H. *Johns Hopkins*, FACPM,  
 FRCPC

**GENETICS**

**Chair**

Younghusband, H.B., B.Sc., M.Sc. *Carleton*, Ph.D. *ANU*

**Professor of Genetics**

Green, J., B.Sc., M.Sc. *British Columbia*, Ph.D. *Memorial*,  
 C.F.M.G.

**Associate Professors of Genetics**

Fernandez, B., M.D. *Memorial*, FRCPC, FCCMG  
 Green, R., B.Sc., Ph.D. *Birmingham*  
 Sun, G., M.D. *CMU China*, Ph.D. *Hiroasaki U Japan*

**Assistant Professors of Genetics**

Turner, L., M.D. *Memorial*, FRCPC, FCCMG  
 Young, T., Ph.D. *Memorial*

**Adjunct Professors of Genetics**

Bassett, A., B.Sc., M.D. *British Columbia*, FRCPC  
 Ives, E.J., M.B., Ch.B. *Glasgow*, DCH *London*, MS *Michigan*,  
 FRCPC

**Cross Appointed from Laboratory Medicine**

Han, F-Y, M.D. *Henan*, FCCMG *McGill*  
 Randell, E.W., Ph.D. *Memorial*, DCC, FCACP *Toronto*  
 Xie, Y-G, M.D. *Hanan*, Dr.Med. *Zurich*

**Cross Appointed from Biology**

Carr, S., B.Sc. *PSU*, Ph.D. *California*

**MEDICINE**

**Professor and Chair**

Slater, A., B.Sc. *Waterloo*, M.Sc., B.Med.Sc., M.D. *Memorial*,  
 FRCPC

**Professor Emeritus**

Pryse-Phillips, W.E.M., M.D. *London*, M.R.C.P., FRCPC, Neuro.,  
 M.R.C.Psych., F.R.C.P.

**Professors of Medicine**

Adams, G.B., M.D. *McGill*, FRCPC  
 Bowmer, M.I., B.Sc., M.D., C.M. *McGill*, FRCPC  
 Carayanniotis, G., B.Sc. *Patras*, Ph.D. *Toronto*; Joint appointment  
 with Basic Medical Sciences  
 Peters, S., M.D. *Memorial*, FRCPC

**Professor of Medicine (Part-time)**

Rusted, I.E., O.C., B.A. *Toronto*, M.Sc. *McGill*, M.D., C.M., LL.D.  
*Dalhousie*, LL.D. *Mount Allison*, D.S.L. *Trinity College*, FRCPC,  
 M.A.C.P.

**Professor of Medicine (Neurology)**

Ogunyemi, A.O., M.B., B.S. *Lagos*, FRCPC

**Professor of Medicine and Therapeutics (Part-time)**

Ingram, D.W., M.B., B.Ch., B.A.O. *Queen's University*, *Belfast*,  
 M.S.(Med.) *Minnesota*, M.C.F.P.(Honorary), F.R.C.P.(C),  
 F.A.C.P.

**Professor of Medicine (Respirology)**

Edstrom, H.W., M.D. *Dalhousie*, M.Sc. *Manitoba*, F.C.C.P.,  
 F.A.C.P., FRCPC

**Professors of Medicine (Nephrology)**

Barrett, B.J., M.B., B.Ch., B.A.O. *Cork*, M.Sc., FRCPC  
 Harnett, J., M.B., B.Ch., B.A.O. *Cork*, F.R.C.P.I., FRCPC  
 Parfrey, P., M.B., B.Ch., M.D. *Cork*, M.R.C.P., FRCPC; University  
 Research Professor, Awarded 1995

**Associate Professors of Medicine**

Colbourne, A., B.Sc. *Memorial*, B.A. *Oxford*, M.Sc., M.D. *Memorial*,  
 M.A. *Oxford*, FRCPC

Hamilton, S.F., M.D. *Memorial*, FRCPC

**Professor of Medicine (Biochemistry)**

Vasdev, S.C., B.Sc., M.Sc., Ph.D., D.V.M. *Punjab*; Cross  
 appointment to Basic Medical Sciences

**Professor of Medicine (Cardiology)**

Sussex, B.A., M.B.B.S. *Melbourne*, M.Sc. *Alberta*, FRCPC

**Associate Professors of Medicine (Endocrinology)**

Galway, A.B., B.Med.Sc., M.D. *Memorial*, FRCPC; Cross  
 appointment to Obstetrics & Gynecology  
 Joyce, C.J., M.D. *Dalhousie*, FRCPC; Cross appointment to  
 Obstetrics & Gynecology

**Professor of Medicine (Endocrinology)**

Kovacs, C.S., M.D., B.A. *Queen's*, FRCPC; Cross appointment to  
 Obstetrics & Gynecology; Winner of the President's Award for  
 Outstanding Research 2002-2003

**Professor of Medicine (Gastroenterology)**

Fardy, J.M., B.Med.Sc., M.D. *Memorial*, M.Sc. *Western Ontario*,  
 FRCPC

**Associate Professor of Medicine (Gastroenterology)**

Burse, F., B.Sc., M.D. *Memorial*, FRCPC

**Associate Professors of Medicine (Hematology)**

Grewal, K.S., B.Med.Sc., M.D. M.Sc. *Memorial*, FRCPC  
 Scully, M.F., M.B., B.A.O., B.Ch. *Dublin*, F.R.C.P.I., FRCPC

**Associate Professor of Medicine (Nephrology)**

Paul, M., M.D. *Toronto*, FRCPC

**Associate Professor of Medicine (Neurology)**

Goodridge, A.E., M.D. *Memorial*, FRCPC; Winner of the  
 President's Award for Distinguished Teaching, 1998

**Associate Professor of Medicine & Pathology**

Whitman, L.A., B.Sc. *McGill*, M.D., *Memorial*, FRCPC

**Associate Professors of Medicine (Respirology)**

Clarke, H., B.Sc. *Memorial*, M.D., C.M. *McGill*, FRCPC  
 Fox, G.A., B.Sc., B.Med.Sci., M.D. *Memorial*, FRCPC

**Associate Professors of Medicine (Rheumatology)**

Khraishi, M., M.B., B.Ch. *Cairo*, M.D. *Memorial*, FRCPC  
 Rahman, P., M.D. *Memorial*, M.Sc. *Toronto*, FRCPC; Winner of  
 the President's Award for Outstanding Research, 2003-2004

**Associate Professor of Nursing and Medicine**

Way, C., B.N., B.A. *Memorial*, M.Sc.(A) *McGill*, Ph.D. *Virginia*

**Assistant Professor of Medicine**

Nguyen, C., B.Sc., M.Sc., M.D. *Toronto*, FRCPC

**Assistant Professor (Cardiology)**

Connors, S., D.Phil. *Oxford*, M.D. *Memorial*, FRCPC

**Associate Professor of Medicine and Family Medicine**

MacDonald, S.M., B.Sc.N., M.D. *McMaster*, C.C.F.P.

**Assistant Professors of Medicine (Emergency Medicine)**

Baggs, D., M.Sc., M.D. *Memorial*, FRCPC  
 Best, T., B.Sc.(Hons.), M.D. *Memorial*, FECPC

**Assistant Professors (Gastroenterology)**

Borgaonkar, M., B.Sc., M.D. *Memorial*, FRCPC  
 McGrath, J.S., B.Sc., M.D. *Memorial*, FRCPC

**Assistant Professor of Medicine (Neurology)**

Stefanelli, M., B.Sc., M.D. *British Columbia*, FRCPC

**Assistant Professor (Nephrology)**

Murphy, S., B.Sc. *St. Francis Xavier*, B.Med.Sc., M.D. *Memorial*,  
 FRCPC

**Assistant Professor of Medicine (Medical Oncology)**

Laing, K., B.Med.Sc., M.D. *Memorial*, FRCPC

**Assistant Professors (Hematology)**

Duggan, P., B.Sc., M.D. *Memorial*, FRCPC  
 Tompkins, K.A., B.Med.Sc., M.D. *Memorial*, FRCPC

**Assistant Professor (Endocrinology)**

Chandurkar, V., M.B., B.S. *Bombay*, ABIM, ABEM

**Assistant Professor of Medicine and Pharmacy**Mugford, G., B.Sc., Ph.D. *Memorial***Clinical Professors of Medicine**

Duguid, N., B.S., M.B., Ch.B. *Edinburgh*, M.R.C.P. (U.K.), FRCPC  
 Khanna, V., M.B., B.S. *Grant Medical College*, FRCPC  
 Young, R.W., M.D., C.M. *Dalhousie*, FRCPC

**Clinical Professor of Medicine (Neurology)**Jacob, J.C., M.B., B.S. *Vellore*, FRCPC**Clinical Professor (Nephrology)**Handa, S.P., MB, BS *Punjab*, FRCPC, DABIM, FACP, DABN**Clinical Associate Professors of Medicine**

Corbett, B.N., B.Sc., B.Med.Sc., M.D. *Manitoba*, FRCPC  
 Ganguly, P.K., M.B., B.S. *Calcutta*, D.M.R.T. *London*, F.F.R.,  
 R.C.S.I.

Joshi, P., B.Sc., M.D. *Manchester*, FRCPCMurray, D.C., M.D. *Dalhousie*, FRCPCRose, B.F., B.Med.Sc., M.D. *Memorial*, FRCPCSpurrell, P.A., M.D., C.M. *Dalhousie*, FRCPCStone, E., B.Sc., M.D. *Memorial*, FRCPCYoung, J.G., M.B., B.Ch. *Ireland*, FRCPC**Clinical Associate Professors of Medicine (Cardiology)**Bewick, D.J., B.Sc., M.D. *Dalhousie*, FRCPCMarr, D.R., B.A. *New Brunswick*, M.D. *Dalhousie*, FRCPCMissan, S.S., M.B., Ch.B. *Sheffield*, FRCPCWilliams, A., B.Med.Sc., M.D. *Memorial*, FRCPC**Clinical Associate Professor (Gastroenterology)**Cockeram, A.W., B.Sc., M.D. *Calgary*, FRCPC, ABIM, ABG**Clinical Associate Professor (Rheumatology)**Grant, E., B.Sc., M.D. *Dalhousie*, FRCPC**Clinical Associate Professor (Geriatrics)**Jarrett, P.G., B.Sc., M.D. *Dalhousie*, FRCPC**Clinical Professor of Medicine (Dermatology)**Gulliver, W.P., B.Sc., B.Med.Sc., M.D. *Memorial*, FRCPC**Clinical Assistant Professors (Radiation Oncology)**Greenland, J., B.Med.Sc., M.D. *Memorial*, FRCPCTompkins, B., B.Sc., M.D. *Memorial*, FRCPCVerma, M., M.B., B.S., M.D. *Delhi*, FRCPC**Clinical Assistant Professors of Medicine**Atalla, N.G., M.B., B.Ch. *Cairo*Azher, T., M.B., B.S. *Allama Iqabqal*, MRCPiBailey, P.A.B., B.Sc., M.D. *Saskatchewan*, FRCPC, DABPNBorgaonkar, R.D., M.B., B.S. *India*, FRCPCCostain, G.A., B.Sc. *New Brunswick*, M.D. *Dalhousie*, FRCPCDolan, S.P., B.Sc. *New Brunswick*, B.Med.Sc., M.D. *Memorial*,  
 FRCPC, ABIMForgeron, P., B.Sc.(Hons.) *Dalhousie*, M.Sc. *Queen's*, M.D.  
*Memorial*, FRCPCFurlong, M.B., B.Sc. *Dalhousie*, M.D. *Memorial*, FRCPCGogan, N., B.Sc., B.Med.Sc., M.D. *Memorial*, FRCPCGraham, J.D., M.D. *Toronto*, FRCPCHannaford, M., B.Sc., M.D. *Memorial*, FRCPCJoshi, P., B.Sc., M.D. *Manchester*, FRCPCKneeling, D.N., B.Sc. *New Brunswick*, M.D. *Dalhousie*, CCFP,  
 FRCPC, FABDLandells, I.D.R., B.Med.Sc., M.D. *Memorial*, FRCPCMacDonald, E., B.Sc., M.D. *Dalhousie*, FRCPCMacNeil, D., B.Sc.(Hons.) *Dalhousie*, M.Sc., Ph.D., M.D. *Alberta*,  
 FRCPCMarkanday, A., M.D. *New York*, ABIMMay, B., B.A. *Wooster*, M.D. *Syracuse*, A.B.I.M., FRCPCMcCarthy, J., B.Sc., M.D. *Memorial*, FRCPCMukherji, A., M.Sc. *New Brunswick*, M.D. *Dalhousie*, FRCPCMurphy, G., M.D. *Ireland*, FRCPCO'Brien, M.H., B.Sc. *Ireland*, M.B., B.A.O., B.Ch. *Cork*, FRCPCPippy, C., B.Sc. *McGill*, M.D. *Dalhousie*, FRCPCRaju, M.R., B.Sc. *Dalhousie*, M.B., B.S. *Mysore*, FRCPCRaman, K.R.K., M.B., B.S., M.D. *Madras*, M.R.C.P. *U.K.*, M.R.C.P.  
*Ireland*, FRCPCReddy, S.B., M.D. *Memorial*, FRCPCReid, P.H., B.Sc. *Memorial*, M.D. *Dalhousie*, MRCPiRorke, S.C., B.Sc., B.Med.Sc., M.D. *Memorial*, FRCPCRuggles, D., B.Sc., M.D. *Dalhousie*Sadowska, E.D., M.D. *Bialystok*, FRCPCSekhar, H.B.C., B.Sc., M.B., B.S., M.D. *India*, M.R.C.P. *United*  
*Kingdom*, FRCPCSheridan, J.J., M.B., B.A.O., B.Ch. *Dublin*, M.R.C.P.I., FRCPCSiddiqui, J.Z., M.B., B.S. *Pakistan*Tavenor, T., B.Med.Sc., M.D. *Memorial*, FRCPCTaylor, D., B.Sc., M.B., Ch.B. *Edinburgh*, FRCPCTeskey, R., B.Sc. *Carlton*, M.D. *Ottawa*, FRCPCTong, A., M.B., B.S. *Hong Kong*, FRCPCTrahey, J., B.Med.Sci, M.D. *Memorial*West, P.H.F., B.Sc., M.D. *Dalhousie*, FRCPC**Clinical Assistant Professors of Medicine (Cardiology)**Bessoudo, R., M.D. *Mexico*, FRCPC, FACC, FACPDouglas, J.G., B.Sc. *King's College*, M.D. *Dalhousie*, FRCPCFagan, S., B.Sc., B.Med.Sc., M.D. *Memorial*, FRCPCLutchmedial, S.R., B.A. *Queens*, M.D., C.M. *McGill*, FRCPCPaddock, V., B.Sc., B.Med.Sc., M.D. *Memorial*, FRCPCPearce, N., B.Sc., M.D., M.Sc. *Memorial*, FRCPC**Clinical Assistant Professor (Neurology)**Hoppe, B.J., M.D., Ph.D. *Warsaw***Clinical Assistant Professor of Medicine (Physical Medicine & Rehabilitation)**Woolfrey, P., B.Sc. *Acadia*, B.Ed., B.Med.Sc., M.D. *Memorial*,  
 FRCPC**Clinical Assistant Professors (Medical Oncology)**Ahmed, C.E., M.B., B.S. *Quaid-i-Azam*, ABIM, ABMOZaidi, A., M.B., B.S. *Aga Khan*, ABIM**Clinical Assistant Professors (Nephrology)**Anees, I., M.B., B.S. *Fatima Jinnah*, ABIM, ABNSohi, P.S., B.Sc., B.A.Sc. *Ottawa*, M.A.Sc. *Waterloo*, M.D., C.M.  
*McGill*, FRCPC**Clinical Assistant Professors (Dermatology)**Tomi, Z., M.B., B.Ch. *Alfata*, MRCP(UK), FRCPCBaxter, K.L., B.N., B.Sc. *Dalhousie*, B.Sc. *New Brunswick*,  
 B.Med.Sc., M.D. *Memorial*, FRCPC, ABD**Clinical Assistant Professors (Gastroenterology)**Beaudin, D.J., B.A. *Layola College*, M.D., C.M. *McGill*, FRCPCEmenau, P.L., B.Sc., M.D. *Dalhousie*, FRCPC**Clinical Assistant Professors (Respirology)**Bishop, G.W., B.Sc. *Prince Edward Island*, M.D. *Waterloo*, FRCPCJoshi, P.C., M.B., B.S. *Bombay*, M.Sc. *Jefferson*, FRCPC, ABIM**Clinical Assistant Professor (Endocrinology)**Dorman, J.M., B.Med.Sc., M.D. *Memorial*, FRCPC**Clinical Lecturers of Medicine**Boodhun, M.S., M.B., B.S. *Karachi*Furey, M.U., M.D. *Memorial*, FRCPCHiscock, J.G., B.Sc., B.Med.Sc., M.D. *Memorial*, FRCPC**OBSTETRICS & GYNECOLOGY****Professor and Chair**

Tennent, D.A., L.R.C.P.S.(I), M.R.C.O.G., FRCSC

**Clinical Professor of Obstetrics & Gynecology**Isa, N., M.D. *Cairo*, FRCSC**Professor of Obstetrics & Gynecology (Part-Time)**Dunne, J.T., B.Sc., M.D. *Dalhousie*, FRCSC**Adjunct Professor**Young, D.C., B.Sc. *Memorial*, M.D. *Dalhousie*, M.Sc. *McMaster*,  
 FRCPC**Honorary Research Professor**Walley, R.L., M.B., B.S. *London*, M.P.H. *Harvard*, L.R.C.P.,  
 F.R.C.O.G., FRCSC**Associate Professors of Obstetrics & Gynecology**Crane, J.M., M.D. *Memorial*, FRCSC; Winner of the President's  
 Award for Outstanding Research, 2004-2005Gill, A., M.B., B.S. *India*, FRCSC, FRCOGPopadiuk, C., M.D. *Toronto*, FRCSC**Assistant Professors of Obstetrics & Gynecology**Dawson, L., M.D. *Memorial*, FRCSCDelaney, T., M.D. *Memorial*, FRCSCHealey, S., M.D. *Memorial*, FRCSC

O'Grady, T.F., M.D. *Memorial*, FRCSC  
 Power, P., M.D. *Memorial*, FRCSC  
 Strand, T., M.D. *Alberta*, FRCSC

#### Cross Appointed from Medicine

Galway, A.B., B.Med.Sc., M.D. *Memorial*, FRCPC  
 Joyce, C.J., M.D. *Dalhousie*, FRCPC  
 Kovacs, C.S., M.D. *Queen's*, FRCPC; Winner of the President's  
 Award for Outstanding Research 2002-2003

#### Cross Appointed from Pediatrics

Andrews, W., B.Sc. *Memorial*, M.D. *Dalhousie*, FRCPC  
 Aziz, K., B.A.(Hons.) *Cambridge*, M.B., B.S. *London (UK)*,  
 M.R.C.P. (Peds) (UK), FRCPC

#### Clinical Assistant Professors of Obstetrics & Gynecology

Bakhet, M.M., MBBCh *Egypt*, MRCOG, FRCSC  
 Bartellas, E., M.D. *Israel*, FRCSC  
 Healey, C., M.D. *London*, FRCSC  
 Kravitz, H., B.A., B.S., M.A. *Penn.*, M.D. *Memorial*, FRCSC  
 Kum, F., M.D., *Ireland*, FRCSC  
 Lord, H., M.D. *West Indies*, FRCSC  
 Marais, N., M.B., Ch.B. *South Africa*, FRCSC  
 Reardon, E., M.D. *Dalhousie*, FRCSC  
 Roche, M.P., M.D. *Memorial*, FRCSC  
 Sanderson, F., M.D. *McMaster*, FRCSC  
 Webster, R., M.D. *Dalhousie*, FRCSC

#### Clinical Lecturers of Obstetrics & Gynecology

Colford, D., M.D. *Dalhousie*, FRCSC  
 Patterson, L., M.D. *Dalhousie*, FRCSC  
 Pike, C., M.D. *Memorial*, FRCSC

### LABORATORY MEDICINE

#### Acting Chair

Fernandez, D., M.B., Ch.B., Ph.D. *Sheffield*, FRCPC

#### Professor of Laboratory Medicine (Pathology)

Fernandez, D., M.B., Ch.B., Ph.D. *Sheffield*, FRCPC

#### Associate Professor of Medicine & Laboratory Medicine (Hematology)

Whitman, L.A., B.Sc. *McGill*, M.D. *Memorial*, FRCPC

#### Professor of Laboratory Medicine (Forensic)

Avis, S., B.Med.Sc., M.D. *Memorial*, FRCPC

#### Associate Professor of Laboratory Medicine (Pathology)

Morris-Larkin, C., M.D. *Memorial*, FRCPC

#### Cross Appointed from Basic Medical Sciences

Michalak, T.I., M.D., Ph.D. *Warsaw*

#### Assistant Professor of Laboratory Medicine (Immunology)

Grant, M., B.Sc., M.Sc. *British Columbia*, Ph.D. *McMaster*

#### Associate Professor of Laboratory Medicine (Medical Microbiology)

Hutchinson, J.M., B.Sc., M.D. *Alberta*, FRCPC

#### Assistant Professor Laboratory Medicine (Molecular Genetics)

Xie, Y., M.D. *Hanan*, Dr.Med. *Zurich*

#### Associate Professor of Laboratory Medicine (Biochemistry)

Randell, E.W., Ph.D. *Memorial*, DCC, FCACB *Toronto*

#### Assistant Professors of Laboratory Medicine

Fontaine, D., B.Sc. *UNB*, M.D. *Memorial*  
 Han, F.Y., M.D. *China*  
 Pirzada, A., F.Sc., H.Sc., M.D. *Karachi*

#### Professor of Laboratory Medicine (Neuropathology)

Mathieson, G., M.B., Ch.B. *Aberdeen*, M.Sc. *McGill*, FRCPC

#### Clinical Professor of Laboratory Medicine

Parai, S., M.B., B.S. *Dacca*, FRCPC

#### Clinical Associate Professor of Laboratory Medicine

Pushpanathan, C., M.B., B.S. *India*, FRCPC

#### Assistant Professor of Laboratory Medicine (Neuropathology)

Barron, J., M.Sc., M.D. *Memorial*

#### Clinical Associate Professor of Laboratory Medicine

Ejeckam, G.C., FRCPath, FRCPC

#### Clinical Assistant Professors of Laboratory Medicine

Cook, D.M., B.Med.Sc., M.D. *Memorial*, FRCPC  
 Denic, N., M.D., Ph.D. *Belgrade*, FRCPC  
 Parai, M.R., M.B., B.S. *Dacca*, FRCPC  
 Wadden, P., M.D., B.Med.Sc., B.Sc. *Memorial*, FRCPC  
 Wadhwa, J.K., B.Sc., M.B., B.S. *India*, FRCPC

#### Clinical Lecturer of Laboratory Medicine (Biochemical Pathology)

Varghese, A., B.Sc., M.Sc. *India*

#### Adjunct Professor

Madhavankutty, K.M., B.Pharm. *B.H.U.*, Ph.D. *London*, FCACG

### PEDIATRICS

#### Professor & Chair

Cooper, A.R., B.Sc. *Memorial*, M.D. *Dalhousie*, FRCPC

#### Professor of Pediatrics (Neonatology)

Andrews, W., B.Sc. *Memorial*, M.D. *Dalhousie*, FRCPC

#### Associate Professors of Pediatrics

Barter, O.J., M.D. *Memorial*, FRCPC  
 Curtis, J.A., M.B., B.Ch., B.A.O. *Cork*, M.R.C.P. *UK*, FRCPC  
 Morris, R.F., M.D. *Memorial*, FRCPC  
 Vardy, C., M.D. *Memorial*, FRCPC

#### Associate Professor of Pediatrics (Neonatology)

Aziz, K., B.A.(Hons.) *Cambridge*, M.B., B.S. *London (UK)*, M.R.C.-  
 P. (Peds)UKJ, FRCPC

#### Assistant Professors of Pediatrics

Bridger, T., B.Sc., M.D. *Memorial*, FRCPC  
 Buckley, D., M.B., Ch.B. *Sheffield*, F.R.A.C.P. *Australia*  
 Critch, J., M.D. *Memorial*, FRCPC  
 Dominic, A., M.D. *Memorial*, FRCPC  
 Drover, A., M.D. *Memorial*, FRCPC  
 Newhook, L.A., M.D. *Memorial*, FRCPC  
 Noseworthy, M., M.D. *Memorial*, FRCPC  
 Shah, S., M.B., Ch.B. *Makerere*, M.Med.(Pediatrics), FRCPC

#### Professor (Psychology)

Adams, R.J., B.A. *Concordia*, Ph.D. *McMaster*

#### Associate Professor (Psychology)

Courage, M.L., B.A. *Memorial*, M.Sc. *Alberta*, Ph.D. *Memorial*

#### Clinical Professor of Pediatrics

Davis, A.J., M.D. *Dalhousie*, FRCPC

#### Clinical Associate Professors of Pediatrics

Cheriyian, M., M.B.B.S. *Nagpur*, MRCP (*UK*), FRCPC  
 Doherty, D.S., B.Sc. *New York*, M.D. *Vermont*, FRCPC  
 Muram, B., M.B., B.S. *India*, FRCPC

#### Clinical Assistant Professors of Pediatrics

Al-Dabbagh, M., M.B., Ch.B. *Iraq*, FRCPC  
 Alam, M., M.B.B.S. *Pakistan*  
 Alexander, W.J., M.D. *Memorial*, FRCPC  
 Beament, K., B.Sc.(Hons.), Ph.D. *Manchester*, M.B., B.S. *London*,  
 M.R.C.P. (U.K.)  
 Chrappa, J., M.D. *Bratislava*, FRCPC  
 Crosbie, V., M.D. *Memorial*, FRCPC  
 Dancey, P., M.D. *Memorial*, FRCPC  
 Feener, T., M.D. *Memorial*  
 Guntamukkala, P., M.B.B.S. *India*, FRCPC  
 Hand, J., M.D. *Memorial*, FRCPC  
 Kamra, P., M.B., B.S. *Punjab*, FRCPC  
 Kemp, I., M.B., Ch.B. *South Africa*, FRCPC  
 Kwa, P.G., M.D. *Taiwan*, FRCPC  
 Lambert, T.B., M.D. *Memorial*, FRCPC  
 Luscombe, S., M.D. *Memorial*  
 Marshall, I., M.D. *Memorial*  
 Meek, D.C., M.B., B.Ch. *Cardiff (Wales)*, FRCPC  
 Natsheh, S.E., B.M.Sc., B.Sc. *Memorial*, FRCPC  
 Ojay, C.R. *West Indies*  
 Paras, E., *Istanbul (Turkey)*, FRCPC  
 Porter, R., M.D. *Memorial*, FRCPC  
 Reid, D., B.Sc. *Dalhousie*, M.D. *Memorial*, FRCPC  
 Sanderson, S., *Toronto*, FRCPC  
 Tingley, R.J., *Wes*, B.Sc., FRCPC

**Clinical Assistant Professor of Pediatrics (Immunology/Allergy)**

Hamed, A., M.B., B.Ch. *Cairo, M.Sc.(Immunology) Memorial, FRCPC*

**Clinical Assistant Professor of Medicine**

Landells, I.D.R., B.Med.Sc., M.D. *Memorial, FRCPC*

**Clinical Lecturers of Pediatrics**

Bessell, C., R.N., B.Ed.(Voc.) *Memorial*  
 Kelly, M., M.B., B.Ch., BAD *Dublin, FRCPC*  
 Rolfe, J., B.N. *Memorial, M.Sc. New York*

**Cross Appointed from Laboratory Medicine**

Xie, Y., M.D. *Hanan, Dr.Med. Zurich*

**Cross Appointed from Biochemistry**

Keough, K., B.Sc.(Hons.), M.Sc., Ph.D. *Toronto*

**Adjunct Professors**

Acott, P., B.Sc. *New Brunswick, M.D. Dalhousie*  
 Crocker, J., B.Sc. *King's College, M.D. Dalhousie, FRCPC*

**PSYCHIATRY****Associate Professor and Chair**

Callanan, T.S., B.Sc., M.D. *Memorial, Dip.Psych. McGill, FRCPC*

**Professor**

Strong, H.R., M.D. *Memorial, FRCPC*

**Cross Appointed from Community Health**

Murray, P.M., B.Sc. *Ulster, Ph.D. Stirling, C.Psych.*

**Associate Professor of Psychiatry**

Craig, D.F., B.Sc. *McGill, M.D. Alberta, FRCPC*

**Associate Professors of Child and Adolescent Psychiatry**

St. John, K., B.Sc. *Mount Allison, B.Med.Sc., M.D. Memorial, FRCPC*  
 White, H.P., B.Sc., M.D. *Memorial, FRCPC*

**Associate Professor of Forensic Psychiatry**

Ladha, N.B., M.B. *Dublin, FRCPC, D.A.B.P.N.*

**Assistant Professors of Psychiatry**

Adey, T., M.D. *Memorial, FRCPC*  
 LeDrew, K., M.D. *Memorial, FRCPC*  
 Lynch, S., B.Sc., M.D., *Memorial, FRCPC*  
 Penney, A., M.D. *Memorial, FRCPC*

**Assistant Professor (Basic Medical Sciences)**

Kirouac, G., B.A., M.Sc., Ph.D. *Manitoba*

**Assistant Professor (Biological Psychiatry)**

Chen, X., M.B. *China, Ph.D. Cambridge*

**Associate Professor (Pharmacy)**

Phillips, L., B.Sc.(Pharm.) *Memorial, Doctor of Pharmacy British Columbia*

**Adjunct Professor of Psychiatry**

Karagianis, J.L., B.Med.Sc.L, M.D. *Memorial, FRCPC*

**Clinical Associate Professors of Psychiatry**

Angel, J., M.D. *Memorial, FRCPC*  
 Hogan, M.W., B.A. *St. Mary's, M.D. Dalhousie, FRCPC*  
 Morehouse, R., M.D. *Dalhousie, FRCPC*  
 Noseworthy, G., M.D. *Memorial, FRCPC*

**Clinical Associate Professor of Child and Adolescent Psychiatry**

Maddigan, B., B.Sc., B.Med.Sc., M.D. *Memorial, FRCPC*

**Clinical Assistant Professors of Psychiatry**

Broaders, M., MD *Memorial, FRCPC*  
 Cantwell, T., M.B., B.Ch., B.A.O., D.P.M. *Dublin*  
 Caravan, C., M.D. *Memorial, FRCPC*  
 Collins, D., B.Med.Sci., M.D. *Memorial, FRCPC*  
 Doucet, J., B.Sc., M.D. *Memorial, FRCPC*  
 Hanley, J.B., B.A., B.Ph., B.Th., L.Ph. *Ottawa/St. Paul's, M.D. Memorial, FRCPC*  
 Hogan, K., M.D. *Memorial, FRCPC*  
 Kennedy, N., M.D. *Memorial, FRCPC*  
 MacLaughlin, D., M.D., B.Med.Sc. *Memorial, FRCPC*  
 Martins, I., B.Med.Sci., M.D. *Memorial, FRCPC*

Porter, A., M.D. *Memorial, FRCPC*  
 Pratt, D., B.Sc., M.D. *Memorial, FRCPC*  
 Rayel, M., M.D. *La Salle University, Phillipines, A.B.P.N.*  
 Walsh, C., M.D. *Memorial, FRCPC*  
 Weiner, M., M.D. *Poland, FRCPC*  
 Young, N., M.B.A., M.D. *Memorial*

**Clinical Assistant Professors of Child and Adolescent Psychiatry**

McWilliam-Burton, T., M.D. *Memorial, FRCPC*  
 Snelgrove, C., M.D. *Memorial, FRCPC*

**Clinical Assistant Professor (Clinical Psychology)**

Khalili, H., B.S. *Tehran, M.S., M.B.A. Kansas, Ph.D. Iowa*

**Clinical Assistant Professor of Psychiatry (Clinical Epidemiology)**

Mugford, G., B.Sc., Ph.D. *Memorial*

**Clinical Lecturers of Psychiatry**

Brace, A.W., M.D. *Memorial, FRCPC*  
 Gillespie, F.A., M.B., B.Ch., B.A.O. *N.U.I., FRCPC*  
 Mekawy, M., M.B., Ch.B. *Alexandria University, Egypt*  
 Niklas, J., M.D., *FRCPC Charles University (Czech.)*

**Clinical Lecturers (Clinical Psychology)**

Hillier, C., B.A. *Manitoba, M.Sc. Acadia*  
 Rodgers, G., M.Sc. *Memorial*  
 Simpson, M., B.Sc.(Hons.), M.Sc. *Memorial*  
 Woodrow, J., B.Sc.(Hons.), M.Sc. *Memorial*

**Clinical Lecturer of Psychiatry (Social Work)**

Sinclair, C., B.A., B.S.W., M.S.W. *Memorial*

**RADIOLOGY****Professor and Chair**

Cramer, B.C., M.B., B.Ch., B.A.O. *N.U.I., M.R.C.P. (UK), F.R.C.R. (UK)*

**Clinical Associate Professors of Radiology**

Bartlett, P.J., M.D. *Memorial, FRCPC*  
 Bhatia, R.S., M.D. *McMaster, FRCPC*  
 Bridger, S., M.D., C.M. *Dalhousie, FRCPC*  
 Collingwood, P.W., M.D. *Memorial, FRCPC*  
 Daniels, C., B.Sc., M.Sc. *Western Cape, Ph.D. Berne*  
 Wadden, N.A.T., B.Sc., M.D. *Memorial, FRCPC*  
 Whelan, R.F., M.D. *Dalhousie, FRCPC*

**Clinical Associate Professors of Radiology (Nuclear Medicine)**

Hollett, P., B.Med.Sc., M.D. *Memorial, FRCPC, A.B.N.M.*  
 Wesolowski, C., M.D. *Poland, FRCPC*

**Clinical Assistant Professor of Radiology (Combined Diagnostic Radiology and Nuclear Medicine)**

Jefford, C., M.D. *Memorial, FRCPC, A.B.N.M.*

**Clinical Assistant Professors of Radiology**

Bailey, G.A., M.D. *Memorial, FRCPC*  
 Battcock, S.G., M.D. *Memorial, FRCPC*  
 Colbert, D., M.D. *Memorial, FRCPC*  
 Hache, N., M.D. *Memorial, FRCPC*  
 Harley, R.J., M.D. *Memorial, FRCPC*  
 Heale, R., M.D. *Memorial, FRCPC*  
 Higgins, G.C., B.Sc. *Memorial, M.D. Dalhousie, FRCPC*  
 Hopkins, J.G., M.D. *Memorial, FRCPC*  
 Jeon, P.M., M.D. *Memorial, FRCPC*  
 Major, A.C., M.D. *Memorial, FRCPC*  
 Martin, B., M.B., B.Ch., B.A.O. *N.U.I., FRCPC*  
 Mercer, E., M.D. *Memorial, FRCPC*  
 O'Keefe, J.B., M.D. *Memorial, FRCPC*  
 O'Reilly, M., M.B., B.Ch. *Ireland, D.M.R.D., FRCPC*  
 Peckham, D., B.Med.Sc., M.D. *Memorial, ABR*  
 Pike, E.J., M.D. *Memorial, FRCPC*  
 Rendell, M.J., M.D. *Memorial, FRCPC*  
 Sala, E., B.Sc., M.D. *Memorial, FRCPC*  
 Walsh, E.A., M.D., B.Ch., B.A.O. *N.U.I., M.R.C.P.I. Ireland, L.M.C.C., FRCPC*

**Clinical Associate Professor of Radiation Oncology**

Hong, K.E.M., M.D. *Dalhousie, D.M.R.(T) Toronto, FRCPC*

**Clinical Lecturer of Radiation Oncology**

Ganguly, P.K., M.B., B.S., F.R.R., R.C.S.I.

**SURGERY****Professor & Chair**

Pollett, W.G., B.Sc., M.D. *Dalhousie*, FRCSC

**Professor of Surgery**

Kwan, A., B.Sc., M.D., C.M., M.Sc. *McGill*, FRCSC, F.A.C.S.

**Associate Professor of Surgery**

Boone, D.C., M.D. *Memorial*, FRCSC

**Assistant Professors of Surgery**

Gardiner, P., B.Sc., M.D. *Dalhousie*, FRCSC

O'Dea, F., B.Sc. *Mt. Allison*, M.D. *Memorial*, FRCSC

Pace, D., B.Sc. *Acadia*, M.B.A. *Dalhousie*, M.D. *Memorial*, FRCSC

Stone, N.C., B.Med.Sc., M.D. *Memorial*, FRCSC

Wells, M.K., B.Sc.(Chem), B.Med.Sc., M.D. *Memorial*, FRCSC

Wirtzfeld, D., B.A.(Hons.), B.Sc., M.D. *Calgary*, FRCSC

**Cross Appointed from the Discipline of Genetics**

Green, J., B.Sc., M.Sc. *British Columbia*, C.F.M.G.

**Clinical Professors of Surgery**

Iype, M., M.B., B.S. *Bangalore*, FRCSC

Maroun, F.B., M.D. *Lebanon*, FRCSC

Mitton, A., B.Sc. *UNB*, M.D. *Dalhousie*, FRCSC

**Clinical Professors (Part Time)**

Heughan, C., B.A.(Hons.), M.B., B.Chir. *Cambridge*, FRCSC

Payton, B.W., M.B., B.S., Ph.D. *London*

**Clinical Associate Professors of Surgery**

Felix, W.A., M.D. *Dalhousie*, FRCSC

Fitzgerald, G., M.D. *Toronto*, FRCSC

Melvin, K., B.Sc. *Memorial*, M.D. *Dalhousie*, FRCSC

**Clinical Associate Professor of Surgery (Ophthalmology)**

Conway, V., B.Sc. *Memorial*, M.D. *Dalhousie*, FRCSC

**Clinical Associate Professors of Surgery (Otolaryngology)**

Burrage, K., B.Sc., M.D. *Memorial*, FRCSC

Edgecombe, J.M., M.D., C.M. *Dalhousie*, FRCSC

Smith, T.J., M.D. *Dalhousie*, FRCSC

**Clinical Associate Professor of Surgery (Urology)**

Best, L., M.D. *Autonoma de Guadalajara*, FRCSC

**Clinical Associate Professors of Orthopaedic Surgery**

Noftall, F., B.Med.Sc., M.D. *Memorial*, FRCSC

Peddle, D.B., M.D. *Dalhousie*, FRCSC

Rockwood, P., B.Med.Sc., M.D. *Memorial*, FRCSC

Squire, D.S., B.Sc., M.D. *Memorial*, FRCSC

**Clinical Associate Professor of Surgery (Neurosurgery)**

Murray, G.P., B.Sc., M.Sc., B.Med.Sc., M.D. *Memorial*, FRCSC

**Clinical Assistant Professors of Orthopedic Surgery**

Deane, R.H., M.B., Ch.B. *Capetown*, FRCS *Glasgow*, FRCS *South Africa*, FRCSC

Hogan, T.G., B.Sc., M.D. *Memorial*, FRCSC

Lewis, B.D., B.Sc., M.D. *Memorial*, FRCSC

Martin, R., B.Sc., B.Med.Sc., M.D. *Memorial*, FRCSC

Russell, R., B.Med.Sc., M.D. *Memorial*, FRCSC

Sahajpal, V., B.Sc. *UPEI*, M.D. *UWO*, FRCSC

Tumilty, J., B.Sc., M.D. *Dalhousie*, FRCSC

**Clinical Assistant Professors of Surgery**

Akhtar, J., MBBS *Khyber Medical College*, FRCS (Ireland)

Browne, G.N., B.Med.Sc., M.D. *Memorial*, FRCSC

Cox, C.R., B.MSc., M.D. *Memorial*, FRCSC

Dunphy, D., B.Eng., B.Med.Sc., M.D. *Memorial*, FRCSC (Ophthal)

Johnston, B., B.Sc., M.D. *Dalhousie*, FRCSC

Kirby, S., P.Eng., M.D. *Memorial*, FRCSC

Lee, B.S., B.Sc., M.D. *Dalhousie*, FRCSC

Mann, C., B.Sc. *Mount Allison*, M.D. *Dalhousie*, FRCSC

McClellan, E.S., B.S. *Maryland*, M.D. *Mexico*, FRCSC

Mowatt, J.A., B.Sc. *Kings College*, M.D. *Dalhousie*, FRCSC

O'Brien, J., B.Sc., B.Med.Sc., M.D. *Memorial*, FRCSC

Roger, J., M.D. *Karl Franzens*, FRCSC

Scarth, H., B.Sc. *Dalhousie*, M.Sc. *UWO*, M.D. *Toronto*, FRCSC

Sherwood, A.J., B.Sc. *UNB*, M.D. *Toronto*, FRCSC

Stiles, G., B.A. *UNB*, M.D. *Dalhousie*, FRCSC

Thavanathan, M.J.M., M.B., B.S. *Sri Lanka*, FRCSC

**Clinical Assistant Professors of Surgery (Plastic)**

Cluett, J., M.D. *Memorial*, FRCSC

Rideout, A., B.Sc. *Kings*, B.Sc.(Hons) *Dalhousie*, M.D. *Memorial*, FRCSC

**Clinical Assistant Professors of Surgery (Ophthalmology)**

Bautista, D.V., B.Sc.(Chemistry), B.Med.Sc., M.D. *Memorial*, FRCSC

Bense, M., M.B., Ch.B. *Pretoria*, FRCSC

Whelan, J.H., B.S., B.Med.Sc., M.D. *Memorial*, FRCSC

**Clinical Associate Professor of Surgery (Pediatrics)**

Price, D., B.Med.Sc., M.D. *Memorial*, FRCSC

**Clinical Associate Professor of Surgery (Plastic)**

Jewer, D.D., B.Sc.(Hons.), B.Med.Sc., M.D. *Memorial*, FRCSC

**Clinical Assistant Professors of Surgery (Urology)**

Drover, D.N., B.A., B.Med.Sc., M.D. *Memorial*, FRCSC

Duffy, G., B.Sc., M.D. *Memorial*, FRCSC

French, C., B.Sc., M.D. *Memorial*, FRCSC

Hewitt, R., B.Med.Sc., M.D. *Memorial*, FRCSC

**Clinical Assistant Professor of Surgery (Veterinary)**

Husa, L., MVD. *Kosice*

**Clinical Lecturers of Surgery**

Cardinal, J., B.Sc., D.D.S. *Northwestern*

Farrell, R., B.Sc., M.D. *Memorial*, FRCSC

Mackenzie, D.S., B.Med.Sc., M.D. *Alberta*, FRCSC

**Clinical Lecturer of Surgery (Ophthalmology)**

McNicholas, J., B.Sc., M.D. FRCSC

**Clinical Lecturer of Surgery (Otolaryngology)**

Tjan, E.T., M.D. *Taiwan*, FRCSC

**DIVISION OF COMMUNITY HEALTH****Associate Dean**

Connor, J.T.H., Ph.D., M.Phil. *University of Waterloo*, M.A.

*University of Western Ontario*, B.Sc. *University of Guelph*

**EPIDEMIOLOGY AND PUBLIC HEALTH****Professor Emeritus**

Fodor, J.G., M.D., Ph.D. *Prague*, FRCPC

**Honorary Research Professors of Epidemiology**

Buehler, S., A.B. *Illinois College*, M.A. *Indiana*, Ph.D. *Memorial*

West, R., M.Sc., Ph.D. *McGill*

**Clinical Professor of Microbiology and Epidemiology**

Ratnam, S., M.Sc. *Madras*, Ph.D. *Delhi*

**Adjunct Professor of Epidemiology**

Aldoori, W., M.D. *Cairo*, M.P.A., D.Sc. *Harvard*

**Clinical Associate Professor of Community Health**

Donovan, P., B.Med.Sc., M.D. *Memorial*, M.H.Sc. *British Columbia*

**Associate Professor of Community Health**

Bavington, W., B.A. *Graceland College*, M.D. *Toronto*, D.T.M.H.

*Liverpool*, M.P.H. *Johns Hopkins*, F.A.C.P.M., FRCPC

**Assistant Professor of Epidemiology**

Wang, P., Ph.D., MD, M.P.H. *China*

**Adjunct Professor of Pharmacoepidemiology**

Rawson, N.S.B., B.Sc. *Leicester*, M.Sc. *Newcastle-upon-Tyne*,

Ph.D. *Southampton*

**Clinical Assistant Professors of Community Medicine**

Allison, D., M.D. *Queen's*, FRCP

Hogan, K., B.Sc., M.D. *Memorial*, FRCPC

Roberts, A., B.Sc., B.Med.Sc., M.D. *Memorial*

Stratton, F., B.Med.Sc., M.D. *Memorial*, M.H.Sc. *Toronto*

**Assistant Professor of Epidemiology and Public Health**

Jones, A., Ph.D. *University of Guelph*, D.V.M. *Ontario*

**Associate Professor of Nutrition/Dietetics**

Roebathan, B., B.Sc. *Memorial*, M.Sc. *Saskatchewan*, Ph.D.

*Memorial*

**Adjunct Professor of Community Nutrition**

Moore-Orr, R., S.M. *Iowa*, R.D. *Framingham*, D.Sc. *Harvard*

**Clinical Assistant Professor of Occupational Medicine**  
O'Shea, C., L.R.C.S.P.I. *Dublin*, M.I.C.G.P., C.C.B.O.M.

## **SOCIAL AND BEHAVIOURAL SCIENCE**

**Professor of Social and Health Psychology**  
Murray, P.M., B.Sc. *Ulster*, Ph.D. *Stirling*; Cross appointment to  
Psychiatry and Psychology

**Associate Professor of Social Science and Health**  
Beausoleil, N., B.A. *Laval*, M.A., Ph.D. *UCLA*

**Assistant Professor of Social Science and Health**  
Gustafson, D., B.A. *McMasters*, M.Ed. *Brock*, Ph.D. *Toronto*

**Adjunct Professors of Social and Behavioral Science**  
Flick, U., Dip.Psych., Dip.Soc., Ph.D. *Free U Berlin*, Habilitation  
*Tech U Berlin*  
Hanrahan, M., Ph.D. *London*, UK, M.A. *Ottawa*, B.A. *Memorial*

**Clinical Lecturer in Community Health**  
Tilley, N., B.A. *Memorial*, M.A. *Regis*

## **HEALTH CARE DELIVERY**

**Associate Professor of Health Care Policy and Delivery**  
Neville, D., B.N. *Memorial*, M.Sc.N. *Toronto*, S.M., Sc.D. *Harvard*

**Cross Appointed from Department of Political Science**  
Tomblin, S.G., B.A. *Calgary*, M.A. *Dalhousie*, Ph.D. *British  
Columbia*

**Assistant Professor of Health Policy/Health Services Delivery**  
Mathews, M., B.Sc., B.A. *Calgary*, M.H.S.A. *Alberta*, Ph.D. *Toronto*

**Clinical Assistant Professors of Health Care Delivery**  
Dawe, J., R.N. *St. Clare's*, B.A. *Memorial*, C.H.E.  
Clarke, B., B.S.W. *Memorial*, M.S.W. *Carleton*, R.S.W.  
House, J., B.A. *Reading*, B.Ed. *Memorial*, LL.B. *Dalhousie*  
Williams, R., M.D. *Dalhousie*, C.C.F.P.

## **HEALTH STATISTICS AND HEALTH INFORMATION SYSTEMS**

**Professor of Biostatistics**  
Gadag, V., B.Sc., M.Sc. *Karnatak*, M.Phil., Ph.D. *Poona*; Cross  
appointment to Department of Mathematics and Statistics

**Cross Appointed from Department of Economics**  
May, J.D., B.Comm. *Queen's*, D.Phil. *York (England)*

**Cross Appointed from Department of Geography**  
Simms, A., B.A. *Memorial*, M.Sc., Ph.D. *Calgary*

**Assistant Professor of Health Statistics and Economics**  
Audas, R., B.B.A. *New Brunswick*, M.B.A., M.A. *Dalhousie*, Ph.D.  
*Wales*

**Clinical Assistant Professor of Health Information Systems**  
O'Reilly, S., B.Sc., M.B.A. *Memorial*

## **PROFESSIONAL DEVELOPMENT**

**Vice Dean**  
Peters, S., M.D. *Memorial*, FRCPC

**Assistant Dean**  
Bursey, F., B.Sc., M.D. *Memorial*, FRCPC

**Director, Academic Development For Specialists**  
Fox, G., M.D. *Memorial*, M.Sc. *Western Ontario*, FRCPC, FCCP

**Director, Academic Development (Family Physicians)**  
Rourke, L., M.D. *Western Ontario*, C.C.F.P., F.C.F.P., MCISC

**Director, Research and Development**  
Curran, V.R., B.A. *Memorial*, Dip.Ad.Ed. *St. Francis Xavier*, M.Ed.  
*Dalhousie*, Post Grad. Cert. *British Columbia*, Ph.D. *Guelph*

**Director, Faculty Development**  
McKay, D., B.Sc., M.S., Ph.D. *Michigan State*

**Director, Assessment and Retraining**  
Bannister, E., B.Comm., M.D. *Memorial*

**Director, Professional Development and TETRA**  
Kirby, F., B.Sc., B.Ed., M.Ed. *Memorial*

## **MEDICAL HUMANITIES**

**John Clinch Professor of Medical Humanities and History of  
Medicine**  
Connor, J.T.H., B.Sc. *Guelph*, M.A. *Western Ontario*, M.Phil.,  
Ph.D. *Waterloo*

**Associate Professor of Medical Ethics**  
Pullman, D., B.R.E. *Briercrest*, B.Ed. *Western*, M.Div. *Biola*, M.A.,  
Ph.D. *Waterloo*

**Assistant Professor of Health Care Ethics**  
Brunger, F., B.A.(Hons.) *Winnipeg*, M.A., Ph.D. *McGill*

**Adjunct Professor**  
McDonald, P., B.A. *Memorial*, L.L.B. *Osgoode Hall*

## **CENTRE FOR COLLABORATIVE HEALTH PROFESSIONAL EDUCATION (CCHPE)**

**Co-Director and Associate Professor of Education**  
Curran, V.R., B.A. *Memorial*, Dip.Ad.Ed. *St. Francis Xavier*, M.Ed.  
*Dalhousie*, Post Grad. Cert. *British Columbia*, Ph.D. *Guelph*

**Co-Director and Professor of Education**  
Sharpe, D.B., Cert.Ed. *Loughborough College*, B.Ed., M.Ed.  
*Alberta*, Ph.D. *Texas A and M*

## **CENTRE FOR OFFSHORE & REMOTE MEDICINE (MEDICORE)**

**Medical Director**  
LeDez, K., M.B., Ch.B. *Dundee*, FRCPC

**Technical Director**  
Decker, D., Diving Safety Specialist

**Associate**  
O'Shea, C., L.R.C.P.S. and P.I. *Dublin*, M.D.

## **HEALTH SCIENCES LIBRARY**

**Associate University Librarian (Health Sciences)**  
Beckett, G., B.A. *Simon Fraser University*, M.L.S. *McGill*

**Head, Public Services**  
Barnett, L., B.Sc. *McGill*, M.L.I.S. *Dalhousie*

**Librarians**  
Fahey, S., B.A.(Hons.) *Memorial*, M.L.I.S. *McGill*  
Glynn, L., B.A. *Memorial*, M.L.I.S. *UBC*  
Morgan, P., B.A.(Hons.) *Memorial*, M.L.I.S. *McGill*, M.B.A.  
*Memorial*  
Reid, A., B.A. *Acadia*, M.L.I.S. *Dalhousie*  
Wotherspoon, S.M., B.A. *Queen's*, B.L.S. *Toronto*

## **MEDICAL EDUCATION AND LABORATORY SUPPORT SERVICES**

**Manager**  
Evelly, E., R.T.

## **HEALTH SCIENCES INFORMATION AND MEDIA SERVICE**

**Manager**  
Beckett, G., B.A. *Simon Fraser*, M.L.S. *McGill*

# **1 Background**

The Faculty of Medicine of Memorial University of Newfoundland is the youngest of the 16 Canadian Medical Schools and was one of the four schools suggested by the Hall Royal Commission on Canadian Health Services in its 1964 report.

A series of meetings was begun in 1963 between representatives of Memorial University of Newfoundland, the Newfoundland Medical Association, and the Department of Health of the Government of Newfoundland and Labrador. Following the Hall Commission's recommendation and on the basis of positive advice from Dr. J. Wendell MacLeod, Executive Secretary of the Association of Canadian Medical Colleges, and Dr. Chester B. Stewart, Dean of Medicine at Dalhousie University, Halifax, Nova Scotia, Memorial University of

Newfoundland established a Commission in 1965 to undertake a feasibility study. The late Dr. J.A. MacFarlane, formerly Dean of Medicine at the University of Toronto, and a member of the Hall Royal Commission served as chairman. The MacFarlane Commission's recommendation that a Medical School be established at Memorial University of Newfoundland was confirmed independently by a Royal Commission on Health Services for Newfoundland and Labrador. The chairman of this latter Commission, Lord Brain, an eminent British medical educator, and his advisors, reported that the location of a Medical School in the province was a necessary step in the provision of adequate medical services for Newfoundland.

Dr. Ian Rusted, a local physician who had been involved in the early negotiations and had taken the initiative in introducing continuing medical education for doctors in the province, was appointed Dean of Medicine in 1967. Under his leadership, faculty members were recruited, the undergraduate program was initiated and the first medical students were admitted in 1969. The existing programs of postgraduate training and continuing medical education were strengthened and the spectrum of medical education was subsequently completed in 1971 with the initiation of a program of graduate studies leading to the degrees of M.Sc. and Ph.D.

The undergraduate curriculum was designed to foster integrated learning and to permit contact with patients early in the student's training. To facilitate this integrated approach the administration of the school was set up as a nondepartmental system based on three Divisions: Community Health, Basic Medical Sciences and Clinical Sciences.

Initially the Medical School was housed in temporary buildings. With joint funding by the Federal and Provincial Governments, a Health Sciences Centre was constructed on the North Campus of the University and was officially opened in 1978. This modern building, occupied by the Medical School and the General Hospital, contains a large Health Sciences Library, a Medical Audiovisual Centre, an Animal Care Unit, auditorium, lecture and seminar rooms. The multipurpose teaching laboratories can be readily adapted for different types of teaching and demonstration. The structure of the Health Sciences Centre facilitates integration between basic scientists, clinicians and allied health workers in the hospital, the University and the community. Clinical research facilities are located adjacent to basic research units and some research laboratories provide services in clinical investigation. Services such as cafeteria and stores are common to the Medical School and the Health Care Corporation of St. John's.

The General Hospital is part of a network of teaching hospitals in St. John's and throughout the province. The conventional use of major referral centres as teaching resources is complemented by the availability of Regional and Community Hospitals to provide valuable clinical experience for undergraduate and postgraduate students.

In contrast to many other schools, the class size at the University's Medical School is small. This permits ready contact between students and faculty, and has obvious advantages in clinical teaching. At present normally 60 students are admitted annually to the first year of the undergraduate medical program.

## 2 Mission and Objectives of the Faculty of Medicine

The Mission of the Faculty of Medicine is as follows:

*Our purpose is to enhance the health of the people of Newfoundland and Labrador by educating physicians and health scientists; by conducting research in clinical and basic medical sciences and applied health sciences and by promoting the skills and attitudes of lifelong learning*

The objectives of the Faculty of Medicine are consistent with the objectives of Memorial University of Newfoundland in developing and maintaining excellence in the quality of its academic standards and of research, establishing programs to meet the expanding needs of the province and of providing the means to reach out to all the people.

The Faculty seeks to attain these objectives through an organizational structure which allows optimum interaction among the various disciplines within the Medical School and with other Faculties and Schools as appropriate.

The organizational structure includes interactions with hospitals and other institutions affiliated with the University. The term 'Medical School' refers to the wider organizational structure of the Faculty of Medicine within the University and the Affiliated Hospitals and institutions.

The specific objectives are:

1. To teach medical students to be physicians; and to provide such learning experiences as will inspire all medical graduates of the school to be prepared to practice medicine at the highest standards, serving all individuals and societies in the pursuit of health.
2. To acknowledge the special geography of this Province by encouraging the education of physicians with exemplary skills for rural practice.
3. To educate and train graduate and diploma students in the health sciences.
4. To provide postgraduate educational experiences in medicine and the medical sciences such that the graduating Canadian physicians will pursue further studies within the school's postgraduate programs, leading to certification in family medicine or specialist subjects, especially in those areas where deficiency in numbers is currently recognized or anticipated.
5. To instill within students at all levels:
  - a. The wish and the capacity to further the practice and science of medicine through the creation of new knowledge for the improvement of the health of the world's peoples.
  - b. The wish and the capacity to improve their own professional practice through continuing self-assessment and scholarship.
  - c. An appreciation of their evolving roles as members of a team of professionals possessing complementary skills.
6. To attract faculty members who will together:
  - a. Act as a resource in providing undergraduate, graduate, postgraduate, and continuing medical education.
  - b. Contribute to the advancement of educational methods.
  - c. Practice the highest quality of primary, secondary, or tertiary care medicine.
  - d. Show leadership in promoting research into the health of the individual and the community, including the organization of health care delivery systems.
  - e. Facilitate and promote education and research appropriate to our mid North-Atlantic environment.
7. To provide educational experiences in the health sciences to students from other Schools or Faculties of Memorial University of Newfoundland and of other educational institutions.
8. To provide Continuing Medical Education experiences which will help physicians to maintain and enhance their competence in medical skills.
9. To provide a learning environment for undergraduate, graduate, and postgraduate students of medicine and the medical sciences who are citizens of other countries.
10. Actively to provide an Informational, Educational and Consultative resource for the whole community.

### 3 Affiliated Teaching Sites

1. Within St. John's: (hospitals under the Health Care Corporation of St. John's)
2. Outside St. John's: (hospital/community settings)
3. New Brunswick: (hospital/community settings)
4. Prince Edward Island: (community settings)

### 4 Description of Medical Training Programs

The Faculty of Medicine offers a four-year undergraduate medical program, comprising a minimum of 186 credit hours, leading to the degree of Doctor of Medicine (MD).

The first two years of medical studies is called Pre-Clerkship. Basic medical science courses are taught primarily in the first year of medical studies. Upon completion of these courses, the Integrated Study of Disease courses follow. Students undertake instruction in Community Health and Clinical Skills concurrently. By the end of Pre-Clerkship, students are expected to be able to take a patient's medical history, perform a thorough physical examination and to derive a logical diagnosis. The Clerkship Preparation Course is completed prior to commencing the Clerkship.

The last two years of medical studies is called Clerkship. During this time, students who are clinical clerks take courses that will allow them to alternate through the major disciplines in hospital and community settings throughout affiliated teaching sites in Newfoundland and Labrador and New Brunswick and community settings throughout affiliated teaching sites in Prince Edward Island. Clinical clerks participate as members of the health care team gaining the knowledge and experience necessary to assume the responsibilities associated with patient care.

Upon successful completion of medical studies, the students are qualified to write Part I of the licensing examinations set by the Medical Council of Canada (MCC). After the award of the MD degree and following successful completion of one year of postgraduate training, they are qualified to write Part II of the MCC licensing examinations.

### 5 Continuing Medical Education

The Faculty of Medicine's Office of Professional Development delivers accredited continuing medical education (CME) programs and plays a major role in meeting the professional development needs of health care professionals throughout Newfoundland and Labrador and across Canada. CME is offered through a variety of formats, including teleconferencing, video-conferencing, online and onsite. Faculty development programs are designed specifically to assist faculty members in their own unique educational requirements. Educational assessments and retraining experiences are available to physicians, international medical graduates and health care practitioners who meet the criteria. The Office of Professional Development is committed to assisting students, faculty members, and physicians in meeting their educational requirements.

### 6 Postgraduate Medical Training Programs

Postgraduate medical training is offered in programs leading to certification by either the College of Family Physicians of Canada (CFPC) or the Royal College of Physicians and Surgeons of Canada (RCPSC). These are full-time training programs comprised of hand-on-practical training complemented by formal teaching and academic study. The programs are completed in a structured learning environment consisting of hospital and community based teaching units, supervised by faculty. The level of responsibility afforded the student is based on regular evaluation of abilities by faculty. The Postgraduate training programs are accredited by the CFPC or the RCPSC and the appropriate licensing authorities.

Postgraduate entry positions are available through the Canadian Residency Matching Service. For further information write to The CaRMS Office, Suite 802, 151 Slater Street, Ottawa, Ontario K1P 5H3, or by telephone to (613) 237-0075, or toll free to (800) 291-3727.

#### 6.1 Family Medicine

The University offers a two-year residency in Family Medicine. This leads to eligibility for certification by the College of Family Physicians of Canada.

#### 6.2 Residency Training Programs

Memorial University of Newfoundland offers specialty training programs in Anesthesia, Internal Medicine (and subspecialty in Nephrology), Neurology, Obstetrics/Gynecology, Orthopedics, Anatomic Pathology, General Pathology, Pediatrics, Psychiatry, Radiology and General Surgery.

Internal Medicine and Pediatrics offer a straight program in the first year of the training program. The normal period of training in Internal Medicine or Pediatrics is four years post-M.D.

In the remaining specialty programs offered by Memorial University of Newfoundland, broad-based clinical training is offered as the first year of the training program. The total length of each of these programs is five years; excepting General Surgery which is a total length of six years.

#### 6.3 Clinical Fellowships

A sixth year of postgraduate study (Clinical Fellowship) may be available to residents who have completed specialty training requirements. These fellowships may be primarily directed to the clinical area, to teaching, or to research.

#### 6.4 Registration

Postgraduate Trainees are registered each year as full-time students of Memorial University of Newfoundland.

#### 6.5 Licensure in Newfoundland and Labrador

All trainees must be eligible for and obtain an educational license from the Newfoundland Medical Board (NMB).

Advice will be provided by the Postgraduate Medical Studies Office.

Note: *It is a requirement of the Newfoundland Medical Board that International Medical Graduates have passed the Test of Spoken English (as well as the University requirement of TOEFL).*



## 7 Graduate Studies

Interdisciplinary interaction and research among the divisions of Basic Medical Sciences, Community Health and Clinical Sciences is promoted.

Programs have been designed to attract students interested in a Graduate Diploma or a Master's, PhD or MD-PhD degree. Areas of strength include Applied Health Services Research, Cancer, Cardiovascular and Renal Sciences, Clinical Epidemiology, Community Health, Human Genetics, Immunology, and Neurosciences. Details of the graduate programs are provided in the School of Graduate Studies section of this Calendar.

## 8 Regulations for the Degree of Doctor of Medicine

### 8.1 Admission to the Faculty of Medicine

1. All applications for entry to the program of studies leading to the M.D. degree are dealt with by the Admissions Office of the Faculty of Medicine and must be submitted to that office on or before the closing date (normally October 15th). No application received after this date will be considered. An application processing fee of \$75.00 is required from all applicants.
2. Applications are reviewed after the closing date by the Admissions Committee of the Faculty of Medicine. This Committee has the delegated authority of the Faculty Council to admit or decline to admit students, following guidelines and procedures acceptable to that Council.
3. Admissions will normally be to the first year of medical studies. In exceptional circumstances, admission with advanced standing may be offered.
4. Entry to medical school is on the basis of competition for a fixed number of places. The Admissions Committee takes account of an applicant's academic background, performance on the Medical College Admissions Test (MCAT) and information on an applicant's personal characteristics and achievements as given by the applicant, by referees' reports and, in some cases, by personal interviews. Age by itself is not used as a basis for selection or rejection. Both age and the length of time away from full-time studies may be taken into consideration. The residency status of each applicant at the time of the closing date for application (normally October 15) will be determined by guidelines established by the Admissions Committee and approved by Faculty Council. For each candidate, the residency status determined at that time will apply throughout the admissions process and the period of undergraduate medical education. Priority is given to applicants who are bona fide residents of this province.
5. The Admissions Committee's decision to admit or decline to admit an applicant will be made on the basis of the competition for entry in the year of application and will be determined by the Committee's judgement of the likelihood of an applicant succeeding in the academic and professional studies leading to the award of the M.D., and in the eventual practice of medicine.
6. To be eligible for admission, an applicant shall have completed a bachelor's degree including the prerequisite subjects of two courses in English at a recognized university or university college before admission. In exceptional circumstances an application may be considered from someone who does not expect to hold a bachelor's degree at the time of admission.

Such an applicant will have completed at least twenty courses including the prerequisite subjects of two courses in English at a recognized university or university college before admission and be a student who has work related or other experience acceptable to the Admissions Committee.

The word "course" is taken to mean a unit of work in a particular subject taken in one semester. No application will be considered from a candidate who cannot produce evidence that the above requirements have been met or will have been met by the time of entry to the Medical School.

In addition, all applicants must write the new MCAT (introduced in 1991) prior to the application deadline.

7. Each applicant is responsible for ensuring that all the required information on the application form, e.g. transcripts, MCAT scores, referees' reports, is supplied to the Admissions Committee, and for providing any further information required by this Committee. An application is not considered complete until these documents have been received.
8. The Admissions Committee may request that a candidate attend an interview.
9. The University may require you to submit to a medical examination by a physician selected by the Medical School.
10. Notification of the Committee's decision will be made to candidates by letter signed by, or on behalf of, the Chair of the Admissions Committee. No other form of notification can be considered to be official.
11. The letter of acceptance will give the successful applicant fourteen (14) days in which to confirm that he/she will accept the place offered. The signed intention to accept the offered place must be accompanied by a deposit of \$200.00 which will be credited towards tuition fees. The deposit will be forfeited if the applicant subsequently declines the place.  
If no reply to the offer of a place is received within fourteen days, the offer by the Faculty of Medicine will be withdrawn on the appropriate date, and the applicant will be informed of this by letter.
12. In order to register, applicants who have been accepted as international students will be required to sign a document indicating that they will pay differential fees throughout the undergraduate medical program and that they will have the status of non-Canadians in the postgraduate matching process.
13. The Admissions Committee, at its discretion, may grant deferral of admission for one year to a maximum of two successful applicants in the first round of offers for any one admission cycle. An applicant must request a deferred entry at the time of responding to an offer of admission. The first round of offers are normally confirmed by mid-June and requests for deferral are considered by mid-July.
14. Successful applicants must normally complete a certified Basic Cardiac Life Support course before beginning medical school.
15. Unsuccessful applicants who wish to reapply for admission are required to submit the application forms relevant to the year of re-application and will be required to enter the competition in that year. An unsuccessful applicant can meet with the Assistant Dean for Admissions or the Admissions Officer to discuss reapplying.
16. An unsuccessful applicant has the right to appeal against the decision of the Admissions Committee not to offer him/her a place, if it is felt by the applicant that the decision was reached on grounds other than those specified in Clauses 1-4 above. The appeal should be made in writing within fourteen days of the notification of the decision and should be directed to the Dean of Medicine. The letter should state clearly and fully the grounds for the appeal. If the Dean of Medicine, in consultation with the Registrar, judges the grounds to be sufficient, the formal appeals mechanism will be initiated.

### 8.2 Evaluation

1. Subject to the approval of Senate, the overall policy of evaluation and the planning of the programs of studies leading to the MD

degree are the responsibility of the Committee on Undergraduate Studies for the Faculty of Medicine, which is a standing committee of the Council of the Faculty of Medicine. Responsibility for scheduling and coordinating courses rests with an appointed Chair of the Pre-Clerkship or Clerkship Committee in collaboration with the chairpersons of courses/subjects taught in a year or section of the curriculum.

2. Each student is expected to complete the work of the class as described in the current regulations of the Faculty of Medicine for each year of the program and to pass the prescribed academic and professional examination. In this context, the professional evaluation will cover, not only the skills expected of a student, but personal conduct and relationships with peers, patients, hospital personnel, faculty members and staff.
3. For Pre-Clerkship courses/subjects and Medicine 7280, evaluation of an individual student's performance is conducted by the course/subject chair or instructor(s). The overall results of the course/subject evaluations are expressed on a four point internal scale as outstanding, pass, borderline or fail. For Clerkship, overall evaluations of discipline rotations/selectives and electives are the responsibility of the respective discipline or electives coordinator. There is an internal five point scale of outstanding, above average, average, below average and fail.
  - a. The Chair of the Pre-Clerkship or Clerkship and/or the Chair of the appropriate course/subject committee is responsible for ensuring that each student is informed of the results of each evaluation. The chair of the course/subject committee will notify the student and Pre-Clerkship or Clerkship Chair, in writing, of any concerns that have arisen about performance.
  - b. It is the responsibility of the student to consult immediately with the Chair of the Pre-Clerkship or Clerkship Committee and/or the Chairperson of the course/subject committee regarding any course/subject in which concerns about performance have been expressed. Within one week of receiving notification of the grade for a course/subject, a student may submit a written request to the Chair of the Pre-Clerkship or Clerkship Committee for reconsideration of the grade awarded or for a reread of an exam/paper.
  - c. The student is responsible for notifying the Chair of the Pre-Clerkship or Clerkship Committee immediately of any new circumstances or of any pre-existing circumstances that have not previously been reported which could affect his or her individual performance in the work of the class.

### 8.3 Promotion

1. Student Promotions Committees are standing committees of Faculty Council and are composed of the Manager of Student Affairs and faculty members of the Pre-Clerkship or Clerkship Committee. It is the responsibility of a Student Promotions Committee to monitor each student's progress for each year of the undergraduate curriculum on the basis of the grades submitted by course chairpersons.
  - a. A Student Promotions Committee will review the results of all course/subject evaluations in any year. On the basis of this review, this Committee will decide which students should be promoted to the next year of studies. In reaching its decisions the Student Promotions Committee will take into account professional, as well as academic factors, and any special circumstances which may warrant consideration.
  - b. A Student Promotions Committee may require students to pass additional examinations or to do remedial work before being considered for promotion. Students with a "Fail" grade in any course cannot be promoted; such students may be required to repeat the entire course or any appropriate section and must pass an appropriate evaluation before a positive promotions decision is made. The amount and quality of makeup required of a student is at the discretion of the Student Promotions Committee, but it cannot be undertaken while any other course, including electives or selectives, is in progress, nor if the student's full participation in subsequent courses is in any way jeopardized.
2. A Student Promotions Committee may decide not to promote students who have shown consistent borderline performances if it is anticipated that performance in the subsequent year would be adversely affected by the unsatisfactory progress.
3. A student who is deemed by a Student Promotions Committee to be unsuitable for promotion may be required to repeat all or part of the studies in any year, or may be required to withdraw either conditionally or unconditionally.
  - a. If a student is required to repeat a year on the grounds of unsatisfactory performance, his or her performance in the repeated year must be at a level at which no remedial work or supplementary evaluation is required. If this standard is not met, a Student Promotions Committee may require the student to withdraw unconditionally.
  - b. Normally the option to repeat a year can only be offered to a student once during his/her MD program. This restriction may be waived if it has been demonstrated that the student's performance has been adversely affected by other factors acceptable to a Student Promotions Committee and duly authenticated.
  - c. If a Student Promotions Committee requires a student to withdraw conditionally, the Chair of the Pre-Clerkship or Clerkship Committee will report to the Dean of the Faculty of Medicine the nature of the conditions to be met and the time period specified for meeting the conditions. The Dean may then recommend to the Registrar that the student be required to withdraw. Any student who has been required to withdraw conditionally may be readmitted once the conditions have been met. If the conditions are not met within the specified time limit, the student will be required to withdraw unconditionally.
  - d. If a Student Promotions Committee requires a student to withdraw unconditionally, the Chair of the Pre-Clerkship or Clerkship Committee will report the decision and the basis upon which it was reached to the Dean of the Faculty of Medicine. The Dean may then recommend to the Registrar that the student be required to withdraw from the program. Any student who is required to withdraw unconditionally and who wishes to re-enter the Faculty must apply to the Admissions Committee in competition with all other applicants by the appropriate deadline date.
4. A student has the right to make a formal appeal against a decision of a Student Promotions Committee. However, this appeal cannot be made on the basis of the grades awarded in individual courses, as the student will normally have had the opportunity of contesting grades immediately after notification. A formal appeal by a student against the decision of this Committee must be made on grounds other than the grades awarded, e.g., default of procedure. This appeal should be made in writing, clearly stating the basis for the appeal and should be directed in the first instance to the Registrar of the University. The Registrar, in consultation with the Dean, will determine whether or not the grounds stated are sufficient to warrant a formal hearing of the appeal.
5. In addition to the above clauses, the Faculty of Medicine reserves the right to require a student to withdraw from the program at any time when acceptable cause is demonstrated. In such cases, the Dean, on behalf of the Faculty, shall recommend such withdrawal to the Registrar who will then take appropriate action. Any such action is subject to the right of appeal by the student. An appeal should be made in writing clearly stating the basis for the appeal and should be directed in the first instance to the Registrar of the University. The Registrar, in consultation with the Dean, will determine whether or not the grounds stated are sufficient to warrant a formal hearing of the appeal.
6. Any student who enters the first year of the medical program but withdraws within the first seven weeks may be permitted re-entry only by re-application to the Admissions Committee in competition with all other applicants by the appropriate deadline date.
7. a. Upon completion of an academic year, a student in good academic standing may elect to withdraw temporarily from studies,

e.g., to pursue graduate studies after completion of the second year.

- b. Any student may be permitted to withdraw in accordance with **UNIVERSITY REGULATIONS - General Academic Regulations (Undergraduate) Withdrawing from the University**. In all cases, the intent to withdraw voluntarily should be discussed with the Chair of the Pre-Clerkship Committee or the Clerkship Committee, as appropriate. The student must make a written request for voluntary withdrawal to the Dean who will then consult with the appropriate Committee Chair. In the event that a student wishes to return to medical school, the Dean should ensure that the sufficient revision and preparatory work are undertaken before the student is permitted to resume medical studies.
- c. Students permitted to withdraw are advised of the date upon which they are required to resume medical studies. In the absence of good cause, any such student who does not resume studies on the specified date will be deemed to have left the program.

## 8.4 Curricular Requirements (MD)

Students entering the MD program will be governed by curricular requirements in effect at the time of their admission. In the event of readmission, students will be governed by curricular requirements in effect at the time of their readmission.

The Clerkship Student Promotions Committee recommends to Faculty Council those students to be awarded the MD degree.

## 9 Medicine Courses

The courses in Pre-Clerkship form a continuum. Some courses are composed of several individual subjects.

Clerkship provides clinical experience in the affiliated teaching hospitals and community sites of Memorial University of Newfoundland. The students become members of the patient care team and have graded and supervised responsibility.

### 9.1 Courses in the First and Second Year of Medical Studies

**5600 Basic Science of Medicine I** is an integrated course with several subjects including anatomy, biochemistry, genetics, immunology, microbiology, pathology and physiology. This course introduces students to the structure and function of the human body and provides the foundation of the basic science of medicine. A wide range of teaching methods are used including lectures, small group sessions, and laboratory sessions/demonstrations.  
CH: 14

**5610 Clinical Skills I** introduces students to the main elements of the medical interview and techniques of counselling. Students are then expected to acquire skill in examining normal individuals and eliciting symptoms and signs in patients and presenting the findings in a logical and comprehensive manner. Emphasis is placed on developing a sympathetic and understanding approach to the patient. The course also provides an integrated approach to clinical symptoms and signs as manifestations of disordered function or structure. Ethical issues playing a significant role in assessment and management of clinical problems are considered.  
AR: attendance is required  
CH: 9

**5640 Community Health I** introduces several aspects of community health including health promotion, disease prevention, biostatistics, epidemiology, social and organizational factors in health, environmental and occupational health, community nutrition and behavioural sciences. Lectures and small group sessions are complemented with practical experience obtained through group research projects and field teaching in the community in both a rural and urban context. Aspects of medical ethics relative to community health are integrated throughout the course. Emphasis is placed on understanding the determinants of health and illness and the context in which they occur. The principles of research are introduced and students may initiate research opportunities that are carried through subsequent courses in the curriculum.  
CH: 9

**5650 Integrated Study of Disease I** involves studying diseases of the major organs/body systems and includes integration with the pathophysiological basis of disease, pathology and pharmacology. The course also incorporates the relevant aspects of preventive medicine, clinical genetics, clinical epidemiology and occupational medicine.  
CH: 10

**5660 Family Medicine Pre-Clerkship Elective** is offered to medical students interested in enhancing their patient interviewing and clinical examination skills. Each student will be paired with an experienced family physician in the community (rural and urban opportunities) for two to four weeks during the summer months at the end of the first and/or second year. Students gain practical experience of working at the primary care level in a variety of settings that could include office-based practice, home visits, emergency departments, labour and delivery and both long-term care facilities and in-hospital ward experiences. (This varies depending on the family physician's practice profiles.) Students applying for this course must be currently registered as a first or second year medical student in a Canadian medical school.

AR: attendance is required

**6600 Basic Science of Medicine II** is a continuation of Basic Science of Medicine I.  
CH: 8

**6610 Clinical Skills II** is a continuation of Clinical Skills I.

AR: attendance is required

CH: 9

**6640 Community Health II** is a continuation of Community Health I.

CH: 9

**6650 Integrated Study of Disease II** is a continuation of Integrated Study of Disease I.

CH: 30

**6660 Family Medicine Pre-Clerkship Elective** has the same course description as Medicine 5660.

AR: attendance is required

**7000 Clerkship Preparation Course**

AR: attendance is required

CH: 2

### 9.2 Courses in the Third and Fourth Year of Medical Studies

The Third Year is approximately 14 months in duration; it begins in September and continues until November of the following year. It is composed of the core courses 7200-7250 and two (8 credit hours) elective courses. The Fourth Year begins immediately upon completion of the Third Year and continues until May of the following year. It includes one (4 credit hours) elective course, three (12 credit hours) selective courses, and Medicine 7280.

**7200 Internal Medicine**

AR: attendance is required

CH: 15

**7210 Surgery**

AR: attendance is required

CH: 10

**7220 Psychiatry**

AR: attendance is required

CH: 10

**7230 Pediatrics**

AR: attendance is required

CH: 10

**7240 Rural Family Practice**

AR: attendance is required

CH: 5

**7250 Obstetrics/Gynecology**

AR: attendance is required

CH: 10

**7260, 7261 & 7263 Electives**

AR: attendance is required

CH: 12 (4 each)

**7270-7272 Selectives**

AR: attendance is required

CH: 12 (4 each)

**7280 Integrated Basic, Community Health and Clinical Sciences**

CH: 2

### 9.3 Courses Offered By the Faculty of Medicine for Non-Medical Students

**310A and 310B Human Physiology** covers the properties of nerve and muscle cells, the special senses, blood and body fluids, and the nervous, cardiovascular, digestive, immune, respiratory, urinary, endocrine and reproductive systems. Integration of the body's systems in maintaining homeostasis is emphasized. Priority for entry into this course is given to Biochemistry, Nutrition, Dietetics, and other students who are interested in experimental science.

CO: Biochemistry 2101

CR: Biochemistry 311A/B and Medicine 310A/B

LH: to be specified

PR: Biochemistry 2101

**4300 Introduction to General and Autonomic Pharmacology** deals with the general principles of pharmacology (dose-response relationship, drug-receptor interaction, absorption, distribution, metabolism, excretion of

drugs), and drugs that affect neuromuscular and autonomic neurotransmission, the cardiovascular, gastrointestinal, and central nervous systems, and autacoids/prostanoids.

CO: Biochemistry 3106 or Pharmacy 3111

CR: Biochemistry 4220

LH: to be specified

PR: Medicine 310A/B or Biochemistry 311A/B, or Pharmacy 2002/2003 or Pharmacy 3201/3202

**4301 General Pharmacology** deals with drugs affecting the central nervous system, the kidney, hormone secretory systems, as well as a study of antibiotic action and toxicology. Registration is limited to 25 students. This course will be offered at least every other year and interested students should contact the Associate Dean of Basic Sciences, (709) 737-6897.

LC: 2

LH: 3

PR: Biochemistry 3100, and 3102 and Medicine 310A and 310B, or their equivalent, or at the permission of the Instructor or the Associate Dean of Basic Sciences. Absolute course requirement for 4301 is 4300.

Archived Previous Calendar  
University Calendar available at  
[muhca.ca/university-calendar](http://muhca.ca/university-calendar)

SCHOOL OF NURSING

# SCHOOL OF NURSING

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**Librarian**

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## 1 Four Year Bachelor of Nursing (Collaborative) Program

### 1.1 Mission Statement

The mission of the Bachelor of Nursing (Collaborative) Program is to prepare competent entry-level nurses to function in a variety of settings in a changing health care environment. The program fosters life-long learning, the spirit of inquiry and a pursuit of excellence. The program reflects the collaborative efforts of the province's three Schools of Nursing, The Centre for Nursing Studies, Memorial University of Newfoundland School of Nursing, and Western Regional School of Nursing.

### 1.2 Preceptorship

The School of Nursing depends on the cooperation and involvement of a large number of organizations and professional personnel in providing quality clinical placements and instruction to its students.

### 1.3 General Regulations for the Bachelor of Nursing (Collaborative) Program

This Collaborative Nursing Program is offered at Memorial University of Newfoundland School of Nursing, the Centre for Nursing Studies and Western Regional School of Nursing.

Important Note: *Students admitted prior to 2006-2007 will follow the regulations in effect as stated in the 2005-2006 Calendar. Students readmitted after 2005-2006 will follow the regulations in effect as stated in the 2006-2007 Calendar or subsequent Calendar regulations.*

### 1.4 Admission

- Applicants for admission or readmission must complete an application for the Bachelor of Nursing (Collaborative) Program. In addition, students who have not registered for courses at Memorial University of Newfoundland for either of the two immediately preceding semesters must also complete a general application for admission to the University. Applications may be obtained in-person from the School of Nursing or the Office of the Registrar. Completed applications must be submitted to the Office of the Registrar, Memorial University of Newfoundland.
- New applicants to the Bachelor of Nursing (Collaborative) Program will be accepted for the Fall semester only. Applications, including all required documents, must be received by March 1.
- To be considered for admission to the Bachelor of Nursing (Collaborative) Program applicants are required to meet the **UNIVERSITY REGULATIONS - Admission/Readmission to the University (Undergraduate)** of Memorial University of Newfoundland. In addition, high school Advanced Math 3201 is preferred. High school science courses must include the following:
  - Biology 2201 and 3201 or their equivalents
  - Chemistry 3202 or equivalent
- Mature applicants, as defined by Memorial University of Newfoundland, may be considered for admission to the Bachelor of Nursing (Collaborative) Program if they have a high school diploma, or its equivalent, as certified by the Department of Education of Newfoundland. Applicants must also meet the science course requirements stated in Clause 3. in order to be considered for admission. The work and life experiences of mature students who do not meet the normal admission requirements will be reviewed on an individual basis to determine the likelihood of success in the program.
- Admission to the Bachelor of Nursing (Collaborative) Program is on the basis of competition for a limited number of places. Selection of candidates will be based on academic performance and on other criteria considered suitable for professional practice in nursing. Admission to the program is denied to any student if, in the judgement of the Joint Admissions Committee, s/he is deemed unsuitable for admission. Priority will be given to residents of the province.
- An unsuccessful applicant has the right to appeal the decision of the Joint Admissions Committee. The appeal should be made in writing clearly stating the grounds for the appeal within fourteen days of the notification of the decision and should be directed to the Chair, Memorial University of Newfoundland School of Nursing, Committee on Undergraduate Studies, Bachelor of Nursing (Collaborative) Program.
- In addition to the regular quota positions, up to three additional positions per year are available in the Bachelor of Nursing (Collaborative) Program for students of aboriginal ancestry who have met the admission requirements. Applicants wishing to be considered under this Clause must send a letter of request at the time of application and provide documentation of aboriginal ancestry.
- Applicants must satisfy the health and immunization requirements for admission to the Bachelor of Nursing (Collaborative) Program.
- Proof of certification in Standard First Aid and Basic Cardiac Life Support, offered by the Canadian Red Cross Society or St. John Ambulance Association, is required to be submitted prior to entry into the program. Certification obtained from other organizations will be accepted if deemed equivalent by the Schools of Nursing.

### 1.5 Academic Standards and Promotions

- The Memorial University of Newfoundland School of Nursing constitutes the examining body for all School of Nursing examinations. The standing of every student will be assessed at the end of each academic semester by the Committee on Undergraduate Studies, and a grade report will be issued by the Registrar of Memorial University of Newfoundland to the individual student.
- Students are required to achieve a grade of at least 65% or a grade of PAS as appropriate in each of the required nursing courses.
- Students failing to achieve the requirements outlined in Clause 2. are permitted to repeat the given nursing course only once. A second failure in a given nursing course results in withdrawal from the Bachelor of Nursing (Collaborative) Program.
- Failure in excess of two nursing courses during the program results in withdrawal from the Bachelor of Nursing (Collaborative) Program.



5. Students who are required to withdraw from the program, as outlined in Clause 3. or Clause 4., may appeal for readmission after a lapse of two semesters by writing to the Chair, Committee on Undergraduate Studies. Students who are required to withdraw from the program a second time will not be eligible for future admission/readmission to the program.
6. A student may be required to withdraw from a nursing course with a clinical component or from the program at any time, on the recommendation of the Committee on Undergraduate Studies, if the student is deemed unlikely to profit from continued attendance in the nursing course or program and/or is deemed unsafe in a clinical setting. Students who are required to withdraw from the program for reasons outlined in this Clause will not be eligible for future admission/readmission to the program.
7. Students who fail to complete a nursing course for a period of three consecutive semesters will be considered to have withdrawn from the program.
8. Students who wish to take a leave of absence from the program may do so only with the written permission of the Director (or delegate). A leave will be granted for a maximum period of three consecutive semesters. Students on leave who plan to resume their studies must notify the Director in writing one semester prior to registration.
9. Students who voluntarily withdraw from the program prior to the conclusion of the first semester of the first year and who wish to return to the Bachelor of Nursing (Collaborative) Program must re-apply in competition as a new applicant.
10. Students who voluntarily withdraw from the program at the conclusion of the first semester of the program, or later, and who wish to return to the Bachelor of Nursing (Collaborative) Program, must appeal for readmission. Such letters will be sent to the Chair, Committee on Undergraduate Studies. If readmitted, Clause 11. will apply.
11. Students who are readmitted to the program following a period of absence, either as a result of a leave of absence or a withdrawal from the program, may be required to do remedial work upon the recommendation of the Committee on Undergraduate Studies. Remedial work may include the repetition of classroom or clinical courses.
12. Students appealing matters such as admission, readmission, examinations and promotion must make their appeal in writing, clearly stating the basis of the appeal, to the Chair, Committee on Undergraduate Studies. Appeals cannot be made on the basis of grades awarded in individual courses, as the student will normally have had the opportunity of contesting a grade after notification.
13. In special cases the Committee on Undergraduate Studies may waive the course requirements that apply only to the Bachelor of Nursing (Collaborative) Program.

## 1.6 Supplementary Examinations

### 1.6.1 Policy

Any student receiving a grade of 60% in a Nursing course is eligible to write a supplementary examination in that course. Only three supplementary examinations in Nursing courses can be written during the program.

### 1.6.2 Guidelines

1. Supplementary examinations are allowed only in Nursing courses that have a written final examination.
2. Supplementary examinations will have the same weight as final examinations for the course in determining whether the student achieves a passing grade for the course.
3. Any student writing a supplementary examination can only obtain a maximum grade of 65% in the course.
4. Supplementary examinations will be written no later than the first week of the semester immediately following the one in which the course was failed. Normally they should coincide with the writing of deferred examinations in courses where deferred examinations are granted for the semester in question. Grades for supplementary examinations must be received by the Office of the Registrar within one week following the completion of the examination.
5. A student may write a supplementary examination for any one course only once.
6. If it is mathematically impossible to achieve a passing grade in a course, then the student will not be granted a supplementary examination.

## 1.7 Program of Studies: Bachelor of Nursing (Collaborative)

### 1.7.1 Characteristics of the Degree Graduate

The Bachelor of Nursing (Collaborative) Program is designed to prepare graduates who will function as beginning practitioners within a variety of health care settings. The graduate is prepared to assume the roles of direct care giver, educator, counsellor, advocate, facilitator, coordinator of care, researcher, leader and member of the nursing profession. The program prepares the graduate to develop the competencies which include knowledge, values, attitudes and skills required to:

1. Practise holistic nursing within a variety of settings, by collaborating with individuals, families, groups and communities, to assist them to achieve health and well-being through health promotion, illness and injury prevention, maintenance, restoration and palliation.
2. Practise the caring ethic as an integral dimension of nursing.
3. Create a caring environment through effective communication with individuals, families, groups and communities.
4.
  - i. Develop an approach to the care of individuals, families, groups and communities which reflects a synthesis of concepts and theories of sciences, humanities and nursing.
  - ii. Create a personal framework for nursing practice.
5. Provide competent nursing care to meet the health related needs of individuals, families, groups and communities.
6. Use management and leadership skills to co-ordinate and enhance health care within society.
7. Foster the extension of nursing knowledge through use of and participation in nursing research.
8. Use critical thinking to assist individuals, families, groups, and communities to achieve health and well-being.
9. Participate in interprofessional practice among the different healthcare providers participating in the delivery of health care.
10. Appraise how nursing roles emerge as the needs of society evolve.
11. Practise nursing in relation to legal, ethical and professional standards.
12. Accept responsibility for lifelong personal and professional growth using formal and informal strategies for the continuous discovery of knowledge.

13. Recognize the contributions of the nursing profession in global health affairs.
14. Accept responsibility for the promotion of change in health care in response to social, cultural, political and economic factors.

### 1.7.2 Program Requirements

(See Table - **Suggested Sequencing of Courses Bachelor of Nursing (Collaborative) Program**)

One hundred thirty credit hours are required for the completion of the degree. The required credit hours are as follows:

1. **Nursing Credit Hours (94):** 1002, 1003, 1004, 1012, 1014, 1015, 1016, 1017, 1520, 2002, 2003, 2004, 2014, 2502, 2514, 2520, 3001, 3012, 3014, 3113, 3501, 3512, 3514, 3523, 4103, 4104, 4501, 4512, 4515, 4516.
2. **Other Credit Hours (18):** Six credit hours from English; Biochemistry 1430; Biology 3053; Psychology 1000; Statistics 2500 or equivalent, or Education 2900
3. **Elective Credit Hours (12):** Three credit hours from each of the following: Business, Philosophy 2800 to 2810 series or Religious Studies 2610, Political Science, and Sociology/Anthropology
4. **Additional Elective Credit Hours (6):** Any credit courses within the University.

Notes: 1. Selected nursing courses which are designed for the Bachelor of Nursing (Post-RN) program may be used as electives in the Bachelor of Nursing (Collaborative) Program with permission of the Committee on Undergraduate Studies and the course professor.  
2. Students should note that an acceptable level of mathematical proficiency is required as a prerequisite for Nursing 2004. To ensure sufficient time to develop such proficiency, should remedial work be necessary, students are expected to complete the Mathematics Placement Test no later than the start of the Fall Semester in which they are admitted to the nursing program.

## 1.8 Suggested Sequencing of Courses for the Bachelor of Nursing (Collaborative) Program

**Bachelor of Nursing (Collaborative) Program Table**

### Suggested Sequencing of Courses

(An additional 6 credit hours must be completed for the degree requirement.)

Year	Fall	Winter
1	Nursing 1004 Nursing 1002 Nursing 1003 3 credit hours in English Biochemistry 1430	Nursing 1015 Nursing 1012 Nursing 1014 Nursing 1016 Nursing 1017 Nursing 1520 Psychology 1000
2	Nursing 2002 Nursing 2003 Nursing 2004 Nursing 2502 3 credit hours in English	Nursing 2014 Nursing 2514 Biology 3053 Statistics 2500 or equivalent, or Education 2900 3 credit hours in Sociology/Anthropology Nursing 2520
3	Nursing 3001 Nursing 3501 Nursing 4104 3 credit hours chosen from Philosophy 2800-2810 or Religious Studies 2610 3 credit hours in Business	Nursing 3014 Nursing 3113 Nursing 3514 Nursing 3012 Nursing 3512 Nursing 3523
4	Nursing 4103 Nursing 4515 Nursing 4501 3 credit hours in Political Science	Nursing 4512 Nursing 4516

Note: These courses will be offered during the same year at all sites, but the semester of course offering may vary with each site.

## 1.9 Registration Examinations

To meet the licensing requirements for practising nursing in Canada, students must write the Canadian Nurses Registration Exam (CNRE).

To be eligible to write the registered nurse licensure examination, candidates must graduate from an approved School of Nursing and be recommended by the School of Nursing.

In order to be recommended for the registered nurse licensure examination, a student must complete a comprehensive examination set by the Bachelor of Nursing (Collaborative) Program. The comprehensive examination may be in the form of a commercial examination, eg. Mosby Assess Test or NLN exam. The cost of commercial examinations shall be the responsibility of the student.

## 2 Regulations for the Bachelor of Nursing (Collaborative) Program Fast-Track Option

Important Note: Students admitted to the Bachelor of Nursing (Collaborative) Program, Fast Track Option in 2006 and prior to 2006 will follow the regulations outlined below. It is planned that the Bachelor of Nursing (Collaborative) Program, Fast Track Option will be revised, details of which should become available during the 2006-2007 academic year.

The Bachelor of Nursing (Collaborative) Program Fast-Track Option is offered at Memorial University of Newfoundland School of Nursing and the Western Regional School of Nursing.

## 2.1 Admission

1. Applicants for admission or readmission must complete an application for the Bachelor of Nursing (Collaborative) Program and request the Fast-Track Option. In addition, students who have not registered for courses at Memorial University of Newfoundland for either of the two immediately preceding semesters must also complete a general application for admission to the University. Applications must be submitted to the Office of the Registrar, Memorial University of Newfoundland.
2. New applicants to the Bachelor of Nursing (Collaborative) Program Fast-Track Option will be accepted for the Fall semester only. Applications, including all required documents, must be received by March 1.
3. To be considered for admission to the Bachelor of Nursing (Collaborative) Program Fast-Track Option applicants must
  - a. have completed a bachelor degree from a recognized university and meet the **UNIVERSITY REGULATIONS - Admission/Readmission to the University (Undergraduate)** of Memorial University of Newfoundland. An applicant with a bachelor degree must also demonstrate successful completion of the following courses prior to admission:
    - i. Statistics 2500 or equivalent, or Education 2900
    - ii. Biochemistry 1430 or equivalent
    - iii. Biology 3053 or equivalent
  - or**
  - b. qualify for advanced standing. An applicant who has successfully completed all non-nursing course requirements of the Bachelor of Nursing (Collaborative) Program, and is in good standing may qualify for advanced standing. Applicants must demonstrate successful completion of the following courses (36 credit hours) prior to admission:
    - i. six credit hours from English; Biochemistry 1430 or equivalent; Biology 3053 or equivalent; Psychology 1000 or equivalent; and Statistics 2500 or equivalent, or Education 2900;
    - ii. 3 credit hours from each of the following: Business, Philosophy 2800 to 2810 series or Religious Studies 2610, Political Science, and Sociology/Anthropology; and
    - iii. 6 additional elective credit hours selected from any credit courses within the University.
4. Admission to the Bachelor of Nursing (Collaborative) Program Fast-Track Option is on the basis of competition for a limited number of places. Selection of candidates will be based on:
  - a. academic performance:
    - i. applicants who have completed a bachelor degree must have a minimum GPA of 3.0 (on a 4 point scale) in their degree program
    - ii. applicants for advanced standing must have a minimum overall GPA of 3.0 (on a 4 point scale) and a minimum GPA of 3.0 (on a 4 point scale) in the courses (36 credit hours) required for admission (see 3. b. above)
  - b. evidence of ability to successfully maintain a full course load; and
  - c. other criteria considered suitable for professional practice in nursing.
5. Applicants may be requested to attend an interview.
6. Applicants must provide two letters of reference.
7. Applicants must satisfy the health and immunization requirements for admission to the Bachelor of Nursing (Collaborative) Program.
8. Proof of certification in Standard First Aid and Basic Cardiac Life Support, offered by the Canadian Red Cross Society or St. John Ambulance Association, is required to be submitted prior to entry into the program. Certification obtained from other organizations will be accepted if deemed equivalent by the Schools of Nursing.
9. Admission to the program is denied to any student if, in the judgement of the Joint Admissions Committee, s/he is deemed unsuitable for admission. Priority will be given to degree holders and residents of the province.
10. An unsuccessful applicant has the right to appeal the decision of the Joint Admissions Committee. The appeal should be made in writing clearly stating the grounds for the appeal within fourteen days of the notification of the decision and should be directed to the Chair, Memorial University of Newfoundland School of Nursing, Committee on Undergraduate Studies.

## 2.2 Academic Standards and Promotions

1. The Memorial University of Newfoundland School of Nursing constitutes the examining body for all School of Nursing examinations. The standing of every student will be assessed at the end of each academic semester by the Committee on Undergraduate Studies, and a grade report will be issued by the Registrar of Memorial University of Newfoundland to the individual student.
2. Students are required to achieve a grade of at least 65% or a grade of PAS as appropriate in each of the required nursing courses.
3. Students failing to achieve the requirements outlined in Clause 2. must withdraw from the Bachelor of Nursing (Collaborative) Program Fast-Track Option. They may be allowed, with special permission from the Directors, to resume their studies within the regular stream of the Bachelor of Nursing (Collaborative) program and are subject to all its academic standards. Accordingly, invoking this Clause carries over to the Bachelor of Nursing (Collaborative) program as a first failure in the relevant course(s).
4. A student may be required to withdraw from a nursing course with a clinical component or from the program at any time, on the recommendation of the Committee on Undergraduate Studies, if the student is deemed unlikely to profit from continued attendance in the nursing course or program and/or is deemed unsafe in a clinical setting. Students who are required to withdraw from the program for reasons outlined in this Clause will not be eligible for future admission/readmission to the program.
5. Students who fail to complete a nursing course for a period of three consecutive semesters will be considered to have withdrawn from the program.
6. Students who wish to take a leave of absence from the program may do so only with the written permission of the Director (or delegate). A leave will be granted for a maximum period of three consecutive semesters. Students on leave who plan to resume their studies, must notify the Director in writing one semester prior to registration.
7. Students who voluntarily withdraw from the Fast-Track Option prior to the conclusion of the first semester of the first year and who wish to return to the Bachelor of Nursing (Collaborative) Program Fast-Track Option must re-apply in competition as a new applicant.
8. Students who voluntarily withdraw from the Fast-Track Option at the conclusion of the first semester of the program, or later, and who wish to return to the Bachelor of Nursing (Collaborative) Program Fast-Track Option, must appeal for readmission. Such letters will be sent to the Chair, Committee on Undergraduate Studies. If readmitted, Clause 9. will apply.
9. Students who are readmitted to the program following a period of absence, either as a result of a leave of absence or a withdrawal from the program, may be required to do remedial work upon the recommendation of the Committee on Undergraduate Studies.

Remedial work may include the repetition of classroom and/or clinical courses.

10. Students appealing matters such as admission, readmission, examinations and promotion must make their appeal in writing, clearly stating the basis of the appeal, to the Chair, Committee on Undergraduate Studies. Appeals cannot be made on the basis of grades awarded in individual courses, as the student will normally have had the opportunity of contesting a grade after notification.
11. In special cases, the Committee on Undergraduate Studies may waive the course requirements that apply only to the Bachelor of Nursing (Collaborative) Program Fast-Track Option.

## 2.3 Supplementary Examinations

### 2.3.1 Policy

Any student receiving a grade of 60% in a Nursing course is eligible to write a supplementary examination in that course. Only three supplementary examinations in Nursing courses can be written during the program.

### 2.3.2 Guidelines

1. Supplementary examinations are allowed only in Nursing courses that have a written final examination.
2. Supplementary examinations will have the same weight as final examinations for the course in determining whether the student achieves a passing grade for the course.
3. Any student writing a supplementary examination can only obtain a maximum grade of 65% in the course.
4. Supplementary examinations will be written no later than the first week of the semester immediately following the one in which the course was failed. Normally they should coincide with the writing of deferred examinations in courses where deferred examinations are granted for the semester in question. Grades for supplementary examinations must be received by the Office of the Registrar within one week following the completion of the examination.
5. A student may write a supplementary examination for any one course only once.
6. If it is mathematically impossible to achieve a passing grade in a course, then the student will not be granted a supplementary examination.

## 2.4 Program of Studies: Bachelor of Nursing (Collaborative) Program Fast-Track Option

Courses in the Bachelor of Nursing (Collaborative) Program Fast-Track Option are taken in the sequence identified in the table - *Bachelor of Nursing (Collaborative) Program Fast-Track Option, Sequencing of Courses*.

### 2.4.1 Program Requirements for Degree Holders and Students Admitted with Advanced Standing

Ninety-three credit hours in Nursing are required for the completion of the degree. The required credit hours are as follows:

**Credit Hours in Nursing (93):** 1001, 1002, 1003, 1011, 1012, 1014, 1511, 1520, 2001, 2003, 2004, 2011, 2013, 2501, 2511, 2520, 3001, 3111, 3113, 3501, 3511, 3523, 4101, 4103, 4104, 4110, 4501, 4512, 4514

## 2.5 Suggested Sequencing of Courses for the Bachelor of Nursing (Collaborative) Program Fast-Track Option

**Bachelor of Nursing (Collaborative) Program Fast-Track Option Table**

### Sequencing of Courses

Year	Fall	Winter	Spring
1	Nursing 1001 Nursing 1003 Nursing 1002 Nursing *1011 Nursing *2013	Nursing 1012 Nursing 1014 Nursing 1511 Nursing *2003 Nursing *2004 Nursing 1520	Nursing *2001 Nursing *2501 Nursing *2011 Nursing *2511 Nursing *2520
2	Nursing *3111 Nursing *3511 Nursing 4103 Nursing 4104 Nursing *3113	Nursing 3001 Nursing 3501 Nursing *4101 Nursing 4512 Nursing *4501	Nursing *3523 Nursing *4514 Nursing *4110

Notes: 1. \*courses are offered outside of normal sequence in the Bachelor of Nursing (Collaborative) Program  
2. Nursing 2001 and 2501 run over the 1st 6 wks and Nursing 2011 & 2511 run over the 2nd 6 wks.

## 2.6 Registration Examinations

To meet the licensing requirements for practising nursing in Canada, students must write the licensure examination from the Canadian Registered Nurse Examination (CRNE).

To be eligible to write the registered nurse licensure examination, candidates must graduate from an approved School of Nursing and be recommended by the School of Nursing.

In order to be recommended for the registered nurse licensure examination, a student must complete a comprehensive examination set by the Bachelor of Nursing (Collaborative) Program Fast-Track Option. The comprehensive examination may be in the form of a commercial examination, eg. Mosby Assess Test or NLN exam. The cost of commercial examinations shall be the responsibility of the student.

### 3 Bachelor of Nursing (Post-RN) Program

Note: *The regulations listed below do not apply to the Bachelor of Nursing (Collaborative) program.*

#### 3.1 Philosophy

The Memorial University of Newfoundland School of Nursing programs are based on three major beliefs: 1. that nursing is a dynamic and creative process, encompassing the interaction of the nurse, the client, and the environment; 2. that, as one of the health professions, nursing develops, tests, and uses theoretical and scientific knowledge; and 3. that caring for human beings and promoting change toward health are central to nursing. Preparation for nursing requires a broad knowledge base not only in nursing and health sciences but also in the humanities and the natural and social sciences.

Nursing knowledge is concerned with the patterns of human behaviour as it evolves through interaction with the environment and affects human health.

Nursing practice is based on theoretical and scientific knowledge and aims to promote health.

#### 3.2 Objectives

The Bachelor of Nursing programs are designed to provide students with a liberal education which prepares them to be direct care-givers, teachers, counsellors and advocates for their clients. The students will be encouraged to perform these roles in a caring manner. The courses in the programs will contribute to the knowledge, competencies and attitudes of graduates so that they may:

1. Provide for and facilitate comprehensive and effective client care;
2. Convey an awareness of and respect for the values, dignity, and rights of human beings;
3. Recognize the extent to which personal values and attitudes influence the interaction with and care of clients;
4. Apply current knowledge from nursing and other disciplines in any client care environment;
5. Apply scientific methods while maintaining the holistic perspective;
6. Take account of the influences of social, cultural, political and economic forces on the health and lifestyles of people;
7. Communicate and work effectively with other health professionals, agencies and governments in dealing with client care issues;
8. Become self-directed in the pursuit of excellence;
9. Be analytical, critical, and independent thinkers;
10. Use previous experience and education to enhance their knowledge base and competencies;
11. Affirm the values and standards of the nursing profession;
12. Recognize that learning is a continuous life-long process.

#### 3.3 Academic Standards and Promotions

1. The School constitutes the examining body for all School of Nursing examinations. The standing of every student will be assessed at the end of each academic semester by the Committee on Undergraduate Studies, and a grade report will be issued by the Registrar to the individual student.
2. Students in the Bachelor of Nursing Program are required to achieve a grade of at least 65% or a grade of PAS as appropriate in each of the required Nursing courses.
3. Students failing to achieve the requirements outlined in Clause 2. are permitted to repeat the given nursing course only once. A second failure in a given nursing course results in withdrawal from the Bachelor of Nursing (Post-RN) Program.
4. Failure in excess of two nursing courses during the program results in withdrawal from the Bachelor of Nursing (Post-RN) Program.
5. A student may be required to withdraw from a Nursing course with a clinical component or from the program at any time on the recommendation of the Committee on Undergraduate Studies of the School of Nursing, if the student is deemed unlikely to profit from continued attendance in the Nursing course or program and/or is deemed unsafe in a clinical setting. Students who are required to withdraw from the program for reasons outlined in this Clause will not be eligible for future admission/readmission to the program.
6. Students who are required to withdraw from the program under Clause 3. may appeal for readmission after a lapse of two semesters by writing to the Chair, Committee on Undergraduate Studies. Students who are required to withdraw from the program a second time will not be eligible for future admission/readmission to the program.
7. Students appealing matters such as admission, readmission, examinations and promotion must make their appeal in writing, clearly stating the basis of the appeal, to the Chair, Committee on Undergraduate Studies of the School of Nursing. Appeals cannot be made on the basis of grades awarded in individual courses, as the student will normally have had the opportunity of contesting a grade after notification.
8. In special cases the Committee on Undergraduate Studies may waive the course requirements that apply only to the School of Nursing.

#### 3.4 Supplementary Examinations

##### 3.4.1 Policy

Any student receiving a grade of 60% in a Nursing course is eligible to write a supplementary examination in that course. Only three supplementary examinations in Nursing courses can be written during the program.

##### 3.4.2 Guidelines

1. Supplementary examinations are allowed only in Nursing courses that have a written final examination.
2. Supplementary examinations will have the same weight as final examinations for the course in determining whether the student achieves a passing grade for the course.
3. Any student writing a supplementary examination can achieve a maximum grade of 65% in the course.
4. Supplementary examinations will be written no later than the first week of the semester immediately following the one in which the course was failed. Normally they should coincide with the writing of deferred examinations in courses where deferred examinations are granted for the semester in question. Grades for supplementary examinations must be received by the Office of the Registrar

within one week following the completion of the examination.

5. A student may write a supplementary examination for any one course only once.
6. If it is mathematically impossible to achieve a passing grade in a course, then the student will not be granted a supplementary examination.

## 4 Program of Studies: Bachelor of Nursing (Post-RN)

### 4.1 Admission Requirements

Category of Admission	Documents Required
New Post RN applicant; Not registered for courses in the past two consecutive semesters (Fall, Winter, Spring)	General application for admission to Memorial University of Newfoundland. Proof of current practicing RN license 1 letter of reference from current supervisor of nursing position Completed health assessment Completed record of current immunization as outlined on the appropriate School of Nursing form Tentative schedule of program plan
New Post RN applicant; Registered for courses in the past two consecutive semesters (Fall, Winter, Spring)	Supplementary School of Nursing (Post RN) application Proof of current practicing RN license 1 letter of reference from current supervisor of nursing position Completed health assessment Completed record of current immunization as outlined on the appropriate School of Nursing form Tentative schedule of program plan
Previous Post RN admit who has taken a Post RN course in past 6 semesters; Not registered for courses in the past two consecutive semesters (Fall, Winter, Spring)	General application for admission to Memorial University of Newfoundland
Previous Post RN admit who has not taken a Post RN course in the past 6 semesters; Not registered for courses in the past two consecutive semesters (Fall, Winter, Spring)	General application for admission to Memorial University of Newfoundland Proof of current practicing RN license 1 letter of reference from current supervisor of nursing position Completed health assessment Completed record of current immunization as outlined on the appropriate School of Nursing form Tentative schedule of program plan

1. All applications and supporting documents must be submitted to the Office of the Registrar.
2. New applicants to the School of Nursing will be accepted three times a year. Applications, including all required documents, must be received by May 1 for Fall admission, October 1 for Winter admission, or February 1 for Spring admission.
3. For the purpose of admission to the School of Nursing:
  - a. A Registered Nurse is a Nurse who is currently registered in Newfoundland or eligible to register in Newfoundland, or is currently registered or eligible for registration in the province/ country in which (s)he resides.
  - b. It is required that students have a current, practising licence in the jurisdiction in which they plan to complete courses with a clinical component.

*Note: Qualified applicants will be admitted to the program as resources permit.*
4. A student who has not completed a course in the Bachelor of Nursing (Post-RN) program within the last 6 consecutive semesters will be considered to have withdrawn from the program so that other applicants may be accommodated.
5. Students seeking clinical placements outside of Canada must satisfy the clinical agency's immunization requirements, submitting documentation of its requirements to that agency at least one month in advance of the start of the semester in which the course will be taken.
6. Students seeking clinical placements within Canada must satisfy the School of Nursing immunization requirements outlined on the School of Nursing Immunization Requirements form. This documentation must be submitted to the Office of the Registrar in advance of the start of registration for the semester in which the course will be taken.

### 4.2 Program Regulations

One hundred eight credit hours are required for the completion of the degree. Forty-five unspecified transfer credit hours in Nursing are normally awarded on the basis of successful completion of a diploma program in Nursing.

**Credit Hours in Nursing (42):** 2040, 2230, 2700, 2740, 3023, 4002, 4010, 4310, 4701, 4702, 4724, 5210, 5220, and 5700.

**Other Credit Hours (21):**

1. three credit hours of English
2. three credit hours of Statistics 2500 (or equivalent), or Education 2900
3. three credit hours of Philosophy from the 2800-2810 series or Religious Studies 2610
4. twelve credit hours of electives. Of these, at least 6 should be at the 2000 level or above.

Notes: 1. Students should consult the Calendar and contact the appropriate Department for prerequisite requirements.

2. The Committee on Undergraduate Studies, School of Nursing, may recommend that transfer credit (to a maximum of 6 credit hours) be awarded for certain post basic nursing courses/programs or for current Canadian Nurses Association certification.

## 5 Course List

In accordance with Senate's *Policy Regarding Inactive Courses*, course descriptions for courses which have not been offered in the previous three academic years and which are not scheduled to be offered in the current academic year have been removed from the following listing. For information about any of these inactive courses, please contact the Director of the School.

All courses of the School are designated by NURS.

### 5.1 1 Credit Hour Courses

**1017 Fundamental Psychomotor Competencies** will provide the student an opportunity to acquire beginning psychomotor competencies that are related to the provision of client comfort and safety in a variety of settings. As well, this course provides the opportunity for the student to integrate the conceptual framework of the Bachelor of Nursing (Collaborative) program into the development of psychomotor competencies.

CH: 1  
CO: NURS 1004 and 1003  
LH: 2  
PR: NURS 1004 and 1003

### 5.2 3 Credit Hour Courses

**1002 Anatomy and Physiology I** presents a survey of human anatomy and physiology throughout the lifespan. It includes aspects of cytology and histology that form a foundation for the practice of nursing. Special emphasis is given to the skeletal, muscular, nervous and endocrine systems.

CR: Pharmacy 2002 and 3201  
LH: 2

**1003 Developing Therapeutic Relationships** focuses on the application of caring theory to interpersonal communications. It emphasizes the development of the role of communicator in individual and group experiences and in professional relationships. Utilizing an experiential model, laboratory experiences focus on self-awareness and group dynamics.

CO: NURS 1004  
LH: 2

**1004 Introduction to Nursing** introduces the major concepts and theories related to the paradigm of person, health, society, nursing, environment, and nursing education in relation to the philosophy, conceptual framework and objectives of the program. Emphasis is placed on the concept of caring as the essence of nursing practice.

CR: the former NURS 1001

**1012 Anatomy and Physiology II** presents a survey of anatomy and physiology throughout the lifespan. It includes aspects of cytology, histology and embryology that form a foundation for the practice of nursing. Special emphasis is given to the circulatory, respiratory, urinary, digestive, and reproductive systems, including pregnancy and delivery.

CR: Pharmacy 2003 and 3202  
LH: 2  
PR: NURS 1002

**1014 Health Assessment** focuses on the development of competencies needed to assess the health status of individuals throughout the lifespan using a systematic approach. Content includes the nurse's responsibilities for health history, physical examination, interpretation of findings, and documentation.

CO: NURS 1012  
CR: NURS 2040  
LH: 2

**1015 Health Promotion throughout the Lifespan** explores nursing concepts and theories pertaining to health promotion/protection throughout the lifespan. Content includes principles of teaching/learning, introduction to community health and primary health care concepts and the determinants of health.

CO: NURS 1004 or 1001, NURS 1003 and Psychology 1000  
CR: the former NURS 1011  
OR: 24 clinical or lab hours during the semester  
PR: NURS 1004 or 1001, NURS 1003 and Psychology 1000

**1016 Healthy Aging** will explore, in-depth, concepts and issues applicable to the well older adult (65+). Selected theories, physical changes, and psychosocial, ethical, and legal issues associated with aging will be presented.

CO: NURS 1012, 1014 and 1015  
PR: NURS 1002, 1003, and 1004

**1511 Nursing Practice for Health Promotion** provides the student with opportunities to apply knowledge and practise competencies for health promotion and protection across the lifespan, as they are acquired in NURS

1011.  
CO: NURS 1011  
OR: 4 clinical hours per week

**1520 Extended Practice I** provides the student with the opportunity to integrate the knowledge and practise the competencies acquired to date. The focus is the promotion, protection and maintenance of health for well individuals within the context of the family. This course is taught at the end of the winter semester, usually beginning during the final week of the examination period.

CO: NURS 1012, 1014 or 2040, 1015, 1016 and 1017  
OR: 96 clinical hours over three weeks  
PR: NURS 1012, 1014 or 2040, 1015, 1016 and 1017

**2001 Nursing Concepts for the Care of Women and the Child-bearing Family** covers major concepts in women's reproductive health. The two major foci are women and their families through all phases of childbirth and the neonatal period, and nursing care of women experiencing alterations in reproductive health.

CO: NURS 2003 and 2004  
LH: 2  
PR: NURS 1520, 2003, and 2004

**2002 Nursing Concepts for the Care of Women and the Child-bearing Family** covers major concepts in women's reproductive health. The two major foci are women and their families through all phases of childbirth and the neonatal period, and nursing care of women experiencing alterations in reproductive health.

CO: NURS 2003, 2004, and 2502  
CR: NURS 2001  
PR: NURS 1520, 2003, 2004, and 2502

**2003 Pathophysiology** presents general concepts of disease processes and their impact on health. The course focuses on major pathophysiologic changes, including associated etiology, pathogenesis and clinical manifestations. Common illnesses are studied to illustrate these disease processes.

CO: NURS 1012  
OR: tutorial 1.5 hours per week (to be implemented in the 2007-2008 academic year)  
PR: NURS 1012, Biochemistry 1430

**2004 Pharmacology and Nutritional Therapies** explores principles and concepts of pharmacological, nutritional and complementary therapies management of common health problems across the lifespan. Nursing considerations and psychomotor competencies pertinent to these therapies are addressed.

CO: NURS 1012  
LH: 2  
PR: NURS 1012, Biochemistry 1430. A score of 50 on the Mathematics Placement Test or Math 102F or successful completion of a remediation program (as defined by the site) or 3 credit hours in mathematics (excluding Statistics 2500) (to be implemented in the 2007-2008 academic year).

**2011 Nursing Concepts for Children, Adolescents and Young Adults** uses a conceptual approach to focus on the nursing care of individuals and families, from infancy to young adults. The emphasis is on assisting persons experiencing health related needs to achieve optimal functioning.

CO: NURS 2511; 2003 or the former 2250 or 3010/3011, 2004 or the former 2260  
LH: 2  
PR: NURS 1520; 2511; 2003 or the former 2250 or 3010/3011, 2004 or the former 2260

**2013 Professional Development** examines the foundations of professionalism and its application, from both an individual and professional perspective. Content areas include legal/ethical issues, professional role development, current trends and issues, and the exploration of nursing as a theory-based practice.

CO: NURS 1001 or the former 2010 or 2400  
PR: NURS 1001 or the former 2010 or 2400

**2014 Community Health Nursing Theory** focuses on the knowledge required to practise nursing in the community with a variety of clients including individuals, families, groups and communities. It further examines the principles of primary health care, population health, and their application in community health nursing. It also focuses on the multidimensional role of the nurse.

CO: NURS 2003 and 2004, 2514  
CR: NURS 4010 and 4101  
OR: seminar or labs 2 hours per week  
PR: NURS 1520, 2003 and 2004

**2040 Health Assessment** focuses on the development of competencies needed to assess the health status of individuals. A systematic approach will be used for the collection and analysis of data related to the health status of the client. Interpretation of the health assessment findings and of the results of diagnostic tests will be discussed in the context of nurses' responsibilities. (This distance education course may require your attendance at a local

center to participate in one lab practicum during the semester, if numbers warrant).

CR: NURS 1014  
PR: Must be a Registered Nurse or eligible for registration.

**2230 Teaching/Learning** is designed to familiarize the student with theories, principles and methods of learning and teaching and to allow the student to apply them in client teaching situations.

PR: Must be a Registered Nurse or eligible for registration.

**2501 Nursing Practice for the Care of Women and the Child-bearing Family** provides the student with opportunities to apply knowledge and practise competencies acquired in NURS 2001. Selected experiences are offered in a variety of institutional and community-based clinical settings related to the provision of nursing care for women and their families.

CO: NURS 2001  
OR: 8 clinical hours per week

**2502 Nursing Practice for the Care of Women and the Child-bearing Family** provides the student with opportunities to apply knowledge and practise competencies acquired in NURS 2002. Selected experiences are offered in a variety of institutional and community-based settings related to the provision of nursing care for women and their families.

CO: NURS 2002 or 2001  
CR: NURS 2501  
LH: 24 during the semester  
OR: 80 clinical hours during the semester

**2511 Nursing Practice with Children, Adolescents and Young Adults** provides the student with opportunities to apply knowledge and practise competencies acquired in NURS 2011. Selected experiences are offered in a variety of institutional and community based clinical settings related to the provision of nursing care for children, adolescents, young adults and their families.

CO: NURS 2011  
OR: 12 clinical hours per week

**2514 Community Health Nursing Practice I** provides the student with the opportunity to apply knowledge and practise competencies for beginning community health nursing practice acquired in Community Health Nursing Theory.

CO: NURS 2014  
CR: NURS 4310  
OR: 96 clinical hours during the semester  
PR: NURS 1520

**2520 Extended Practice II** provides the student with the opportunity to integrate the knowledge and practise the competencies acquired to date. The focus is on caring for adults in stable health situations and on the application of community health concepts. This course is taught at the end of the winter semester, usually beginning during the final week of the examination period.

OR: 96 clinical hours over three weeks  
PR: NURS 2001 or 2002, and 2501 or 2502, and 2014 and 2514

**2700 Nursing Theories in Practice** is designed to introduce the students to the key concepts, conceptual models and selected theories of nursing. This is a required course for the Bachelor of Nursing (Post-RN) program and may be used as an elective in the Bachelor of Nursing (Collaborative) program.

PR: Must be a Registered Nurse or eligible for registration.

**2740 Current Concepts in Human Physiology** is a comprehensive review of the physiology of the cell and major body systems. It assumes a basic understanding of physiology and provides the basis for concepts developed in NURS 4701 and NURS 4702.

PR: Must be a registered nurse or eligible for registration.

**2990 Spiritual Dimension of Nursing Practice** will focus on the spiritual dimension of nursing practice. Students will explore their own personal spiritual philosophy and development. Key concepts of the spiritual dimension of nursing will be examined, such as spiritual well being, spiritual needs, spiritual distress and spiritual care. Distinction will be made between religion and expressions of spirituality.

PR: NURS 2010 or 1001, 2040 or 1014 for Bachelor of Nursing (Collaborative) students; none for Post-RN's.

**3001 Nursing Concepts for Mental Health** focuses on individuals, families and small groups experiencing psychiatric/mental health problems across the lifespan. The meaning of mental health and illness to the individual, family and vulnerable populations is explored. Course content includes counselling, psychopathology, interdisciplinary psychiatric care, community mental health concepts and analysis of sociopolitical factors/issues affecting mental health.

CO: NURS 3501  
OR: seminar 2 hours per week  
PR: NURS 2520

**3012 Nursing Concepts for Children, Adolescents and Young Adults** uses a conceptual approach to focus on the nursing care of individuals and families, from infancy to young adulthood. The emphasis is on assisting

persons experiencing health related needs to achieve health and well-being.

CO: NURS 3512 or 2511  
CR: NURS 2011  
PR: NURS 2520, 3512 or 2511

**3014 Nursing Concepts in Middle and Older Adulthood** uses a conceptual approach and focuses on individuals and families from middle to older adulthood. The emphasis is on assisting persons experiencing acute and chronic health related needs to achieve health and well being.

CO: NURS 3514  
CR: NURS 3111  
PR: NURS 2520

**3023 Counselling** focuses on the counselling role of the nurse, building on the communication skills inherent in a helping relationship. Gerard Egan's model, an integral part of the course, is a problem-management and opportunity development approach to helping. Key counselling skills are discussed and students have the opportunity to practice these skills to further enhance their ability to effectively counsel clients in a variety of nursing contexts.

CR: NURS 3022  
PR: Acceptance into the Bachelor of Nursing (Post-RN) Program or admission to the Bachelor of Technology Program.

**3111 Nursing Concepts in Middle and Older Adulthood** uses a conceptual approach and focuses on individuals and families from middle to older adulthood. The emphasis is on assisting persons experiencing acute and chronic health related needs to achieve optimal functioning.

LH: 2  
PR: NURS 2520

**3113 Nursing Leadership and Management** is designed to promote an understanding of the theories and principles of leadership and management in relation to the Coordinator of Care nursing role. Emphasis is placed on concepts of organizational structure and function, management of client care, team building, professional development, and application of nursing theories to practice. Current issues and trends are explored.

CO: NURS 3501, 3512 and 3514  
PR: NURS 3501, 3512 and 3514

**3200 Transcultural Nursing** - inactive course.

**3501 Nursing Practice for Mental Health** provides the student with opportunities to apply theoretical knowledge and to practise competencies acquired in NURS 3001 and related courses. Selected experiences related to the provision of nursing care for individuals, families, and small groups are offered in a variety of institutional and community based mental health settings.

CO: NURS 3001  
OR: 12 clinical hours per week for the 2006-2007 and the 2007-2008 academic years; the number of clinical hours will be reduced to 96 hours during the semester commencing in the 2008-2009 academic year.

**3511 Nursing Practice with Middle and Older Adults** is a clinical course that focuses on the application of the concepts and practices which are covered in NURS 3111. Selected experiences are offered in a variety of institutional and community based settings related to the provision of nursing care for middle and older adults, and their families.

CO: NURS 3111  
OR: 12 clinical hours per week  
PR: NURS 2520

**3512 Nursing Practice with Children, Adolescents and Young Adults** provides the student with opportunities to apply knowledge and practise competencies acquired in NURS 3012. Selected experiences are offered in a variety of institutional and community based settings related to the provision of nursing care for children, adolescents, young adults and their families.

CO: NURS 3012  
CR: NURS 2511  
LH: 24 hours during the semester  
OR: 64 clinical hours during the semester  
PR: NURS 2520

**3514 Nursing Practice with Middle and Older Adults** provides the student with the opportunity to practise competencies and apply knowledge acquired in 3014 and related courses. Selected experiences related to the provision of nursing care for middle and older adults, and their families are offered in a variety of institutional and community based settings.

CO: NURS 3111 or 3014  
CR: NURS 3511  
LH: 24 hours during semester  
OR: 96 clinical hours during the semester  
PR: NURS 2520

**4002 Introduction to Nursing and Health Research** introduces students to the key terminology, elements, and processes of research. The focus will be on understanding the components of the research process, interpreting and critically analyzing nursing and health-related research studies, and



understanding the importance of utilizing research for evidence based practice. Students will have the opportunity to explore methodologies in both quantitative and qualitative research.

CR: NURS 4002 and NURS 4600

PR: NURS 4001 or 4201 or Statistics 2500 or equivalent, or Education 2900, or admission to the Bachelor of Technology Program.

**4010 Community Health Nursing I** introduces the student to the field of community health nursing. It focuses on the nursing care of individuals, families, groups, and the community. Core concepts include theoretic approaches to families, epidemiology, health promotion and the community as client.

CO: NURS 4310

CR: the former NURS 4311 or 4312

PR: NURS 2040, 2230, 2700, 3022 or 3023, and 4002.

**4101 Community Health Nursing** focuses on the knowledge required to practice nursing at the aggregate and community levels. It further examines the principles of primary health care, their application in community health nursing and the multidimensional role of the nurse. Core concepts include: community development, epidemiology, program development, and the theoretical bases of community health nursing.

CO: NURS 3520, 3521, 3522, or 3523, and 4501; or admission to the Fast-Track Option

CR: NURS 4010

OR: tutorial 2 hours per week

PR: NURS 3520, 3521, 3522, or 3523; or admission to the Fast-Track Option.

**4103 Issues in Nursing and Health Care** focuses on the development of a personal framework for nursing practice, nursing organizations at the international level and nursing's role and development within health care systems. Current trends and issues in health policy and health care are examined.

CO: NURS 3113

OR: tutorial 2 hours per week

PR: NURS 3113

**4104 Nursing Research** builds on previously introduced research concepts. It explores the research process and its inherent ethical and legal implications. The course focuses on the acquisition of concepts used to critically appraise nursing research studies and examines the relevance of these studies for nursing practice.

CO: Statistics 2500 or equivalent, or Education 2900

CR: NURS 4002

PR: Statistics 2500 or equivalent, or Education 2900

**4110 Senior Seminar** follows the completion of two clinical courses taken during the final semester of the program. It is designed to allow students to share with peers and faculty their ability to critically discuss the professional competencies and issues in complex work-related situations. Students also report on significant aspects of the nursing roles in which they participated during one of the two clinical courses NURS 4512 or 4513.

CO: NURS 4512, 4513 or admission to the Fast-Track Option

PR: NURS 4501 or 4310, 4104 or 4002, and 4103 or 5220

**4310 Community Health Nursing II** allows the student to apply the knowledge and practice the competencies acquired in NURS 4010. Clinical experiences will focus on the nursing of selected families and population groups within the community, using a primary health care framework.

CO: NURS 4010

CR: the former NURS 4311 or 4312

OR: 8 clinical hours per week

**4501 Community Health Nursing Practice II** provides the student with opportunities to apply knowledge acquired in Community Health Nursing Theory and other related courses. It also further develops competencies in community health nursing practice. In the clinical experiences, students work with selected aggregates (including individuals and families) in the community.

CO: NURS 4103 and 4101

CR: NURS 4310

OR: 12 clinical hours per week during the semester for the 2006-2007, 2007-2008, and the 2008-2009 academic years; the number of clinical hours will be reduced to 8 clinical hours per week commencing in 2009-2010 academic year.

PR: NURS 2014, 2514, and 3523

**4512 Community Health Practicum** provides students with the opportunity to integrate and consolidate knowledge and competencies acquired throughout the program and apply them to community health nursing practice. Using a primary health care framework, the student participates in strategies which facilitate the mobilization of communities toward health. Online discussions via webct will be included.

OR: 40 clinical hours per week for four weeks

PR: NURS 2014 or 4101 and 2514 and 4501, or admission to the Fast-Track Option

**4515 Nursing Concepts & Practice for Complex Care** will provide the opportunity for students to work with patients having multiple chronic health

problems in a variety of areas, e.g. mental health, rehabilitation, throughout the lifespan, and in particular, the older adult. This course will also provide further opportunities for the practice and application of counselling skills, and for working with the interprofessional education experience managing patient/resident care.

OR: seminars 1 hour per week

OR: 144 clinical hours during the semester

PR: NURS 3523

**4701 Current Concepts in Pathophysiology** reviews the most recent theories in pathophysiology, current trends in diagnosis and treatment and their nursing implications. This course assumes a basic understanding of physiology.

PR: Acceptance into the Bachelor of Nursing (Post-RN) Program and

NURS 2740, or admission to the Bachelor of Technology Program.

**4702 Current Concepts in Pharmacology and Nutrition** explores current principles of nutrition and pharmacology in a variety of disease states. The course will be built upon previous nutrition and pharmacology knowledge. This course assumes a basic understanding of physiology.

PR: Acceptance into the Bachelor of Nursing (Post-RN) Program and

NURS 2740.

**4724 Clinical Focus: Nursing Care of Adults** allows students to explore in depth, concepts and practices which are relevant to the care of adults with acute and/or chronic illnesses. Emphasis will be placed on assessment, and nursing interventions and strategies to prevent or manage health problems. This course has a clinical component. Students will be required to apply the knowledge gained to client situations in clinical practice.

CR: NURS 4720 or 4723

PR: NURS 2040, 2230, 2700, 3023, 4002, 4701, and 4702.

**5210 Health Care Systems** focuses on the philosophical bases and practical considerations in the organization and administration of Health Care Delivery Systems. The planning, management and evaluation of the Canadian health care system will be compared with those of other countries. Future trends in the delivery of health care to Canadians will be discussed.

CR: NURS 3030

PR: Admission to the Bachelor of Nursing (Post-RN) Program and 3 credit hours in English and NURS 2230; or admission to the Bachelor of Technology Program and 3 credit hours in English.

**5220 Professional Issues** reviews the historical development of the nursing profession and facilitates discussion of factors influential in its evolution. Content will focus on the current status of nursing, ethical issues and the profession's impact on health care delivery. Selected categories of nursing theory, their impact on practice and education will be analyzed in relation to major issues and future trends in nursing.

PR: Admission to the Bachelor of Nursing (Post-RN) Program and 3 credit hours in English and NURS 2230.

**5327 Interdisciplinary Course on Family Violence** focuses on physical, emotional, and sexual violence throughout the life cycle of the family. Issues of family violence will be addressed using an interdisciplinary framework with emphasis on understanding the nature and impact of family violence, incorporating gender and socio-cultural analysis. Emphasis will be given to causal explanations, common patterns, and short and long-term effects of abuse and on the roles of health professionals in prevention and treatment.

CR: Social Work 5327

PR: Must be a Registered Nurse or eligible for registration, or NURS 3001 and 3501 or consent of instructor.

**5700 Nursing Management** is designed to promote an understanding of theories and principles of management of nursing practice. Process, methods and issues are considered with emphasis on practical nursing examples.

CR: the former NURS 4620

PR: Admission to the Bachelor of Nursing (Post-RN) program and 3 credit hours in English and NURS 2230.

UL: This is a required course for the Bachelor of Nursing (Post-RN) program and shall not be used as an elective in the Bachelor of Nursing (Collaborative) program.

## 5.3 6 Credit Hour Clinical Courses

**3523 Extended Practice III** provides the students with the opportunity to apply leadership and management principles in coordinating care for groups of individuals within a variety of nursing care settings. Students also have the opportunity to further develop clinical competencies acquired in previous courses. 3523 is scheduled for an eight week period that begins at the conclusion of the final exam period for winter semester for students in the four year regular stream of the Bachelor of Nursing (Collaborative) program. Students enrolled in the fast track option take this course in the Spring semester.

CH: 6

CR: NURS 3520 and 3521

OR: 40 clinical hours per week for eight weeks

PR: NURS 3001 and 3501, NURS 3111 and 3511 or NURS 3014 and

3514, NURS 3012 and 3512 or NURS 2011 and 2511, NURS 3113 and clinical placement approval from the Committee on Undergraduate Studies.

**4514 Nursing Practice Elective** provides students with the opportunity to practise nursing with a client population and in a setting of their choice. Students apply and test knowledge from nursing and related disciplines in this selected clinical setting. The course also enables students to further develop their professional roles.

CH: 6

CR: the former NURS 3522 or 4513

OR: 40 clinical hours per week for eight weeks

PR: NURS 4101 and 4501. Clinical placement approval from the Committee on Undergraduate Studies.

**4516 Consolidated Practicum** provides students with the opportunity to practise nursing with a client population and in a setting of their choice. Students apply and test knowledge from nursing and related disciplines in this selected clinical setting. The course also enables students to further develop their professional roles. Online discussions via webct will be included.

CH: 6

CR: NURS 3522, 4513 and 4514

OR: 40 clinical hours per week for ten weeks

PR: NURS 4501, 4515 and clinical placement approval from the Committee on Undergraduate Studies

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Current University Calendar available at  
[mun.ca/university-calendar](http://mun.ca/university-calendar)

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SCHOOL OF PHARMACY

# SCHOOL OF PHARMACY

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**Director**

Hensman, L.R., B.Sc.(Pharm.) *British Columbia*, Pharm.D. *SUNY at Buffalo*, M.B.A. *Memorial*; Associate Professor

**Professors**

Daneshtalab, M., Pharm.D. *Teheran*, Ph.D. *Tohoku, Japan*  
Loomis, C.W., B.Sc., M.Sc., Ph.D. *Queen's*; Vice-President (Research)

Neuman, R., B.A. *San Francisco State*, Ph.D. *Alberta*; Cross appointment from Faculty of Medicine

Rahimtula, A.D., M.Sc., Ph.D. *Southampton*; Cross appointment from Department of Biochemistry

West, R., M.Sc., Ph.D. *McGill*; Honorary Research Professor

**Associate Professors**

Colbourne, A., B.Sc. *Memorial*, B.A. *Oxford*, M.Sc., M.D. *Memorial*, M.A. *Oxford*, FRCPC; Cross appointment from Faculty of Medicine

Kara, M., B.Pharm., Ph.D. *Bradford*

Kelly, D., B.Sc.(Pharm.) *Memorial*, ACRP, Pharm.D. *Toronto*; Cross appointment to Faculty of Medicine

Law, R.M.T., B.Sc.(Pharm.) *Toronto*, Pharm.D. *SUNY at Buffalo*

Liu, Hu, B.Sc.(Pharm.), M.Sc. *Beijing Medical*, Ph.D. *Alberta*;

Cross appointment to Department of Biochemistry

Phillips, L., B.Sc.(Pharm.) *Memorial*, Pharm.D. *British Columbia*;

Cross appointment to Faculty of Medicine

Wang, L., B.Sc. M.Sc. *Beijing Medical*, Ph.D. *Alberta*

**Assistant Professors**

Hawboldt J., BSP *Saskatchewan*, Pharm. D., *Washington*

Kozyra, E., B.Sc.(Hon), B.Sc.(Pharm.) *Memorial*, Pharm.D.

*Toronto*

Mugford, J.G., B.Sc., Ph.D. *Memorial*, CMH; Joint Appointment with Faculty of Medicine and Discipline of Psychiatry

Younes, H.M., B.Sc.(Pharm) *Egypt*, M.Sc. (Pharm.) *Jordan*, Ph.D., *Alberta*

**Clinical Professor**

Rawson N., B.Sc., M.Sc., Ph.D. *United Kingdom*; Joint Appointment with Faculty of Medicine

**Clinical Assistant Professor**

Young, S.W., B.Sc.(Pharm.) *Memorial*, Pharm.D. *Idaho State*

**Visiting Assistant Professor**

Rimsay, R.L., B.Sc. *Knox*, Ph.D. *Colorado State*

**Lecturer**

Dillon, C., B.Sc.(Pharm.), *Memorial*, ACRP

**Sessional Instructors**

Chandurkar, K., B.Pharm., M.Pharm. *India*; M.S. *Iowa*

Gamberg J., M.Sc. (Medicine), Ph.D. (Medicine) *Memorial*

**Structured Practice Experience Co-ordinator**

Spurrell, W., B.Sc.(Pharm.) *Memorial*

**Preceptor Orientation Co-ordinator**

Healey, M., B.Sc (Pharm.) *Memorial*

**Laboratory Instructor**

Ryan, P., B.Sc., M.Sc. *Memorial*

## 1 School Description

The School of Pharmacy offers an undergraduate degree in pharmacy and graduate degrees in pharmaceutical sciences. The School is committed to providing an undergraduate program of quality and excellence that will prepare individuals who will contribute significantly in all settings of pharmacy practice. The experiential learning component of the program ensures students have the opportunity to integrate academic learning with professional practice and to develop the necessary knowledge, skills and attitudes required of practising pharmacists. The School encourages a close working relationship among students, faculty, and staff, and prides itself on its strong association with and support of the pharmacy community at both the provincial and national level.

Students must meet all regulations of the School in addition to those stated in the general regulations. For information concerning fees and charges, admission/readmission to the University, and general academic regulations (Undergraduate), refer to **UNIVERSITY REGULATIONS**.

### 1.1 Vision Statement

Fostering the development of pharmacy graduates committed to enhancing the health of individuals and the community.

### 1.2 Mission Statement

Through the scholarly pursuits of teaching, research and service, the School of Pharmacy is dedicated to:

- preparing pharmaceutical care practitioners committed to life long learning
- fostering excellence and innovation in research and graduate studies
- developing and participating in professional practice and community outreach
- advancing the profession

### 1.3 Accreditation Status

The School of Pharmacy is accredited by the Canadian Council for Accreditation of Pharmacy Programs (CCAPP) to June 2010.

## 2 Description of Program

The School of Pharmacy offers an undergraduate program leading to the degree of Bachelor of Science (Pharmacy). This degree is designed to prepare graduates for careers primarily in community and hospital settings but also in the pharmaceutical industry, pharmacy organizations, health sciences research, government, and educational environments. After successful completion of national examinations, a graduate of the program is eligible to apply to be licensed as a pharmacist in Newfoundland and Labrador and other provinces in Canada.

The program of study leading to the Bachelor of Science (Pharmacy) degree has two phases and requires at least five years to complete. Prior to entry to the program students will acquire a background in the mathematical and physical sciences. Once in the program students will take courses in the basic health sciences, pharmacy sub-specialties and social/administrative sciences. At the end of each year students will have an opportunity to apply the academic knowledge acquired and to develop and practice patient care skills by participating in experiential learning within community and hospital settings. During the program students will develop an understanding of the professional and societal responsibilities of a pharmacist, and will recognize the need for lifelong learning.

## 2.1 Structured Practice Experience

Students are required to successfully complete all experiential components of the program, including the Structured Practice Experience (SPE). During SPEs students are placed in community or hospital pharmacy practice settings and are brought into direct contact with patients, pharmacists and other health professionals. Students become involved in the practice of pharmaceutical care and are expected to assume ever-increasing responsibility as their education advances. Such practice experiences ensure students are exposed in situations which cannot be provided in the classroom.

1. The Joint Committee on Structured Practice Experience, consisting of representatives from both the School of Pharmacy and the Newfoundland and Labrador Pharmacy Board, is responsible for providing the overall direction for the program and recommending policies and procedures for its operation.
2. Students will be placed at sites by the School. The Structured Practice Experience Coordinator liaises with students to determine placements.
3. While every effort will be made to accommodate a student's request to complete SPEs in a specific location, a student may be assigned to any participating site within the province of Newfoundland and Labrador.
4. Students are responsible for all travel and accommodation costs associated with the SPE.
5. Students who conduct themselves in such a manner as to cause their termination from the SPE site, including breaches in confidentiality, violation of policies and professional misconduct will be assigned a grade of FAL (fail) for that SPE.
6. Students are required to complete three SPEs, each of four weeks duration, and one SPE of twelve weeks duration. The first three SPEs are completed at the end of the Winter semester in the first, second, and third years of the program. The final SPE is completed in the Winter semester of the final year of the program.
7. Students will be evaluated on their performance during the SPE and on written assignments including workbooks, pharmaceutical care case work-ups and drug information requests. Students may have workbooks audited or they may be formally examined on material learned during the SPE period. The overall evaluation of SPEs will result in the assignment of one of the following grades: PWD (pass with distinction), PAS (pass), or FAL (fail).

## 2.2 Registration as a Pharmacy Student

A student must be registered as a "Pharmacy Student" with the respective provincial or territorial licensing body prior to the commencement of Structured Practice Experiences. Students must meet any requirements which such authorities stipulate. A student who fails to meet the requirements for licensing as a pharmacy student may be required to withdraw from the program.

## 3 Admission Regulations for the School of Pharmacy

In addition to meeting **UNIVERSITY REGULATIONS** students applying for admission for the 1 + 4 program must meet the admission regulations of the School. Admissions regulations for the 2 + 3 program are in the *2003-2004 Calendar*.

### 3.1 General Information

1. Admissions will normally be to the first year of pharmacy studies. In some circumstances, however, admission with advanced standing may be offered.
2. Entry to the School is competitive for a limited number of placements. Priority is given to applicants who are bona fide residents of this province and who are Canadian citizens or permanent residents. The final decision on admission rests with the Admissions Committee of the School.
3. The Admissions Committee considers each applicant's academic background and information on the applicant's personal characteristics and achievements as given by the applicant and by referees' reports. Personal interviews, which may include both a written and oral component, may be required.

### 3.2 Application Forms and Deadlines

1. Application forms are available in person from the School and the Office of the Registrar or through the School's website at [www.mun.ca/pharmacy](http://www.mun.ca/pharmacy). Application forms may also be obtained by writing the School of Pharmacy, Memorial University of Newfoundland, St. John's, NL A1B 3V6 or the Office of the Registrar, Admissions Office, Memorial University of Newfoundland, St. John's, NL A1C 5S7.
2. All application forms and fees for admission to the program for the Bachelor of Science (Pharmacy) must be submitted to the Office of the Registrar of the University on or before the deadline of March 1 in any year. The program commences in the Fall semester.
3. Applications will be reviewed after the closing date by the Admissions Committee of the School. This Committee has the delegated authority of the School's academic council to admit or decline to admit applicants, following guidelines and procedures acceptable to that council.
4. Each applicant is responsible for ensuring that all the required information for application is supplied to the Admissions Committee, and for providing any further information required by the Committee. An application will not be considered to be complete until all documentation has been received.

### 3.3 Admission Requirements to the School

Applicants who are not currently students at Memorial University of Newfoundland must apply for admission to the University under the **Categories of Applicants, Admission Criteria and Other Information** outlined under **UNIVERSITY REGULATIONS - Admission/Readmission to the University (Undergraduate)**. In addition to meeting these regulations, applicants to the School must meet requirements as indicated below.

1. To be eligible for consideration an applicant shall have completed a minimum of 30 credit hours which have been taken or accepted for credit at a recognized university or university college.
2. An applicant is normally required to have completed each of the following courses or their equivalents. The course designations relate to courses taught at Memorial University of Newfoundland including Sir Wilfred Grenfell College.
  - Biology 1001 and 1002
  - Business 2000
  - Chemistry 1050 and 1051 or Chemistry 1200 and 1001
  - English 1080 or English 1000
  - Mathematics 1000 and 1001
  - Physics 1020 and 1021 or Physics 1050 and 1051
3. Normally an application will not be considered from an applicant who cannot produce evidence that the above requirements have been met or will have been met by the time of entry into the School.
4. An unsuccessful applicant who wishes to reapply for admission is required to submit the application forms relevant to the year of reapplication and will be required to enter into the competition for that year.

### 3.4 Acceptance Procedures

1. Notification of the decision of the Admissions Committee of the School will be made to applicants by the Director of the School by letter. No other form of notification will be considered official.
2. The letter of acceptance will give the successful applicant 14 days from the date of the letter of notification in which to confirm acceptance of the placement offer. The signed intention to accept the offer must be accompanied by a deposit of \$100, which will be credited towards tuition fees. The deposit will be forfeited if the applicant subsequently declines the offer or fails to register. If no reply is received within 14 days, the offer by the School will be withdrawn and the applicant will be informed of this by letter.

## 4 Program Regulations - General Degrees

### 4.1 Bachelor of Science (Pharmacy) for Students Entering the 1 + 4 Program

- The 174 credit hour Bachelor of Science (Pharmacy) for students in the 1 + 4 program requires 30 credit hours before admission to the program and 144 credit hours after admission to the program. The program includes four structured practice experiences, three of which are non-credit, with the other having 18 credit hours.
  - The program courses shall normally be taken in the academic terms in the sequence and course load as set out in **Table 1 Bachelor of Science (Pharmacy) (1 + 4 program)**. Students wishing to change the sequence and/or reduce the course load required in the academic terms must first consult with the School's Office of the Director.
  - Elective courses may be taken from any academic unit.

**Table 1 Bachelor of Science (Pharmacy) (1 + 4 program)**

Term	Required Courses	Elective Courses
Courses required for admission	Biology 1001 and 1002 Business 2000 Chemistry 1050 and 1051 or Chemistry 1200 and 1001 English 1080 or English 1000 Mathematics 1000 and 1001 Physics 1020 and 1021 or Physics 1050 and 1051	
Fall Academic Term 1	Chemistry 2440 PHAR 2002 PHAR 2101 PHAR 2150 PHAR 2201 Psychology 1000	3 credit hours
Winter Academic Term 2	PHAR 2003 PHAR 2004 PHAR 201W PHAR 2102 PHAR 2151 PHAR 2202 PHAR 2203 Psychology 1001	
Fall Academic Term 3	Medicine 4300 PHAR 3003 PHAR 3111 PHAR 3150 PHAR 3203 PHAR 3205 PHAR 3501	
Winter Academic Term 4	Biochemistry 2600 PHAR 3009 PHAR 302W PHAR 3103 PHAR 3151 PHAR 3204 PHAR 3206 PHAR 3301	
Fall Academic Term 5	PHAR 4008 PHAR 4401 PHAR 4501 PHAR 4105 PHAR 4150 PHAR 4301	3 credit hours
Winter Academic Term 6	PHAR 403W PHAR 4151 PHAR 4402 PHAR 4502 PHAR 4503 Philosophy 2803	3 credit hours
Fall Academic Term 7	PHAR 5150 PHAR 5301 PHAR 5302 PHAR 5303 PHAR 5401 PHAR 5501	3 credit hours
Winter Academic Term 8	PHAR 500X	



## 5 Promotion Regulations

### 5.1 General Information

- The Committee on Undergraduate Studies will determine each student's promotion status at the end of each academic year.
- In addition to meeting the promotion regulations for the School students must meet the general academic regulations (undergraduate). For further information refer to **UNIVERSITY REGULATIONS - General Academic Regulations (Undergraduate)**.
- Success in the program depends on meeting the requirements of all terms.

### 5.2 Promotion Status

A student's promotion status at the end of each academic year will be in one of the following two categories:

#### 5.2.1 Clear Promotion

Clear Promotion means a student can proceed to the next academic year without restrictions.

- Students will receive a Clear Promotion from an academic year by obtaining an average of 65% and having obtained at least a pass in each course. A weighted average based on credit hours in the Bachelor of Science (Pharmacy) program courses will be calculated for determining eligibility for promotion. Neither promotion nor graduation will be permitted if a student has a numeric grade below 50% in any course in the program.
- Students completing PHAR 2102 must obtain a numeric grade of at least 70%.
- Students completing PHAR 201W, 302W, 401W, 402W, 403W, 410W, 501W, or 500X must obtain a grade of PAS or PWD in each course.
- Students must attain a passing grade in each elective, but these courses will not be included in calculating the student's average grade for the purposes of promotion, graduation, or academic awards.

#### 5.2.2 Promotion Denied

Promotion Denied indicates Clear Promotion is not achieved at the end of each academic year.

- A student with Promotion Denied status will be required to withdraw from the School.
  - A student who does not obtain a clear promotion may be permitted to repeat all or part of the academic year. If a student is required to repeat a year on the grounds of unsatisfactory performance, his or her performance in the repeated year must meet the conditions for Clear Promotion. If this standard is not met, the Committee on Undergraduate Studies may require the student to withdraw from the program.
  - Normally, the option to repeat a year on the grounds of academic difficulties can be offered only once during the student's Bachelor of Science (Pharmacy) program. This restriction may be waived if it has been demonstrated that the student's academic performance has been adversely affected by factors duly authenticated and acceptable to the Committee on Undergraduate Studies.
- A student with Promotion Denied status at the end of the final academic term will not be recommended for graduation until the student's status is changed to Clear Promotion.

### 5.3 Other Information

- Students may be required to withdraw from their program at any time, if, in the opinion of the School, they are unlikely to benefit from continued attendance.
- The Committee on Undergraduate Studies may require a student who is deemed unlikely to benefit from continued attendance in his/her course of study to withdraw conditionally. The Chair of the committee will advise the Director of the School of the circumstances precipitating this action, the duration of the withdrawal and any conditions the student must fulfil during the withdrawal. The Director may then recommend to the Registrar that the student is on conditional withdrawal. Upon completing the conditions, the student may be permitted re-entry to the program. If the conditions are not met, the student may be required to withdraw from the program.
- The School reserves the right to require a student to withdraw from the program at any time when acceptable cause is demonstrated. In such cases, the Director, on behalf of the School, shall recommend such withdrawal to the Registrar who will then take appropriate action. Any such action is subject to the right of appeal by the student. An appeal should be made in writing clearly stating the basis for the appeal and should be directed in the first instance to the Registrar of the University. The Registrar, in consultation with the Director, will determine whether or not the grounds stated are sufficient to warrant a formal hearing of the appeal.

### 5.4 Leave of Absence

- Upon completion of an academic year, a student in good standing may elect to withdraw temporarily from studies. Voluntary withdrawal at other times and for other reasons may be permitted in accordance with **UNIVERSITY REGULATIONS - General Academic Regulations (Undergraduate) - Registration**. In all cases, the intent to withdraw voluntarily should be discussed with the Director. The Director may then recommend to the Registrar that a student be permitted to withdraw for a stated period of time. At the end of this period, the student, in consultation with the Committee on Undergraduate Studies, should ensure that sufficient revision and preparatory work is undertaken to allow studies to be resumed readily. In the absence of good cause, any such student who does not resume studies on the specified date may be deemed to have left the program.

## 6 Waiver of School Regulations

A student has the right to request waiver of School regulations. A student wishing waiver of University academic regulations should refer to **UNIVERSITY REGULATIONS - General Academic Regulations (Undergraduate) - Waiver of Regulations**.

### 6.1 General Information

- The School reserves the right in special circumstances to modify, alter, or waive any School regulation in its application to individual students where merit and equity so warrant in the judgment of the Committee on Undergraduate Studies of the School.

- All requests must be submitted to the Committee on Undergraduate Studies of the School for consideration. A student requesting a waiver of a School regulation must submit the request in writing to the Chair of the Committee on Undergraduate Studies. Medical and/or other documentation to substantiate the request must be provided.
- Any waiver granted does not reduce the total number of credit hours required for the degree.

## 7 Appeal of Regulations

Any student whose request for waiver of School regulations has been denied has the right to appeal. For further information refer to **UNIVERSITY REGULATIONS - General Academic Regulations (Undergraduate) - Appeal of Regulations**.

- An applicant who has been denied admission has the right to appeal this decision of the Admissions Committee if it is felt by the applicant that the decision was reached on grounds other than those outlined in **Admission Regulations for the School of Pharmacy**. The appeal should be made in writing within fourteen days of the notification of the decision and should be directed to the Director of the School. The letter should state clearly and fully the grounds for the appeal. If the Director of the School, in consultation with the Registrar, judges the grounds to be sufficient, the formal appeals mechanism will be initiated.
- A student obtaining a failing grade in a pharmacy course due to exceptional circumstances may be permitted to write a supplementary examination subject to normal appeal process by the student. Such an appeal must be made in writing to the Director and within one week of release of grades.
- A student has the right to make a formal appeal against a decision of the Committee on Undergraduate Studies. However, this appeal cannot be made on the basis of the grades awarded in individual courses, as the student will normally have had the opportunity of contesting grades immediately after notification. A formal appeal by a student against the decision of the Committee must be made on grounds other than the grades awarded, e.g. default of procedure. This appeal should be made in writing, clearly stating the basis for the appeal and should be directed in the first instance to the Registrar of the University. The Registrar, in consultation with the Director, will determine whether or not the grounds stated are sufficient to warrant a formal hearing of the appeal.

## 8 Course Descriptions

In accordance with *Senate's Policy Regarding Inactive Courses*, the course descriptions for courses which have not been offered in the previous three academic years and which are not scheduled to be offered in the current academic year have been removed from the following listing. For information about any of these inactive courses, please contact the Director of the School.

All courses of the School are designated by PHAR and are restricted to students in the School of Pharmacy.

**2002 Anatomy and Physiology I** presents a survey of human anatomy and physiology throughout the lifespan. It includes aspects of cytology and histology that form a foundation for the practice of pharmacy. Special emphasis is given to the skeletal, muscular, nervous and endocrine systems. The course will include both the vocabulary and concepts of anatomy and physiology with the overall goal being the understanding of the interrelationships and integration of all systems from the cell to whole organism.

CR: Nursing 1002 and PHAR 3201  
LH: 2; attendance is required

**2003 Anatomy and Physiology II** presents a survey of human anatomy and physiology throughout the lifespan. It includes aspects of cytology and histology that form a foundation for the practice of pharmacy. Special emphasis is given to the endocrine, circulatory, respiratory, urinary, digestive and reproductive systems. The course will include both the vocabulary and concepts of anatomy and physiology with the overall goal being the understanding of the interrelationships and integration of all systems from the cell to whole organism.

CR: Nursing 1012 and PHAR 3202  
LH: 2; attendance is required  
PR: PHAR 2002

**2004 Introduction to Biochemistry** is an introduction to the major organic substances of living organisms, proteins, carbohydrates and lipids: their structure, analysis and biochemical function. Enzymes. Biochemistry of membranes: plasma membrane and specialized intracellular membranes. Biochemistry of selected differentiated cells.

CR: Biochemistry 2101 and PHAR 3110  
OR: tutorials as required  
PR: Chemistry 2400 and 2401 or Chemistry 2440

**201W Structured Practice Experience I** is a structured practice experience in community pharmacy after completion of the first year which will provide an opportunity for students to apply their technical skills and introduce them to patient care activities. The structured practical experience is comprised of four weeks, 35 hours per week and is held in May/June.

AR: attendance is required  
PR: successful completion of all courses in the 1st year of the program

**2101 Pharmacy Practice I** provides an overview of the Canadian Health Care System, the organization and role of pharmacy and pharmacists in the delivery of health care, and the federal and provincial regulations that govern the practice of pharmacy. An introduction to effective communication strategies in the delivery of pharmaceutical care will be discussed.

CO: PHAR 2150

CR: PHAR 3011

**2102 Pharmacy Practice II** introduces the student to the basic skills and knowledge of the practice of pharmacy. Students will learn to apply these skills to build an expertise in pharmaceutical care. Emphasis will be placed on communication and patient counselling. Students will learn to apply pharmacy regulations in the dispensing of medications. The passing grade in this course is 70%, failing which the student may be required to withdraw from the program.

CH: 2  
CO: PHAR 2151  
CR: PHAR 3004  
LC: 2  
OR: tutorials 2 hours per week; attendance is required

**2150 Pharmacy Skills** provides an introduction to the pharmacy profession with emphasis on necessary learning skills and the educational outcomes of the program. Students will begin the development of drug information search skills, computer skills, public speaking and basic interpersonal communications skills necessary in practice of pharmacy. Students will participate in self-directed learning modules in medical terminology and pharmaceutical calculations.

CH: 1  
CO: PHAR 2101  
OR: practical sessions 3 hours per week; attendance is required; tutorials 1 hour per week

**2151 Pharmacy Skills** provides an introduction to the pharmacy profession with emphasis on necessary learning skills and the educational outcomes of the program. Students will continue the development of drug information search skills, computer skills, pharmaceutical calculation skills and basic interpersonal communications skills necessary in practice of pharmacy. Basic dispensing skills and the application of the legal framework in which pharmacists practice will be developed.

CH: 1  
CO: PHAR 2102  
OR: practical sessions 3 hours per week; attendance is required; tutorials 1 hour per week  
PR: PHAR 2150 and 2101

**2201 Pharmaceutics I** provides an insight into a number of physicochemical basics and explains them within a pharmaceutical context. The course provides the basic foundation necessary for the study of pharmaceutical dosage forms, pharmacokinetics and bio-pharmaceutics.

CR: PHAR 3012  
LH: 3; attendance is required  
PR: Mathematics 1000 and 1001 and Chemistry 1050 and 1051; or Chemistry 1200 and 1001

**2202 Pharmaceutics II** is designed to provide the student with an understanding of pharmaceutical dosage forms and their applications. It applies the principles taught in Pharmaceutics I to understand the design and components of the different pharmaceutical preparations.

CR: PHAR 3005  
LH: 3; attendance is required  
PR: PHAR 2201

**2203 Pharmaceutical Analysis** is designed to introduce some important

techniques and methods of analysis in pharmaceutical sciences. The laboratory exercises consist of both non-instrumental and instrumental analytical techniques that are widely employed in the analysis of pharmaceuticals.

CH: 2

LC: 2

LH: 3 hours every other week; attendance is required

PR: Chemistry 1050 and 1051 or Chemistry 1200 and 1001

**3003 Pathophysiology** examines the nature of disease, causes and effects, and alteration in structure and function of cells, inflammation, neoplasia, genetic and chromosomal diseases, healing and repair, stress and disease.

CR: PHAR 4004

**3009 Pharmacology** explores topics in general pharmacology including drugs used in the treatment of inflammatory diseases, renal pharmacology, anticoagulant and antithrombotic drugs, antihyperlipidemics, drugs used in the treatment of anemia, and endocrine pharmacology.

CR: PHAR 4009

PR: Medicine 4300 or equivalent

**302W Structured Practice Experience II** is a structured practice experience in hospital pharmacy after completion of the second year which will provide an opportunity for students to apply their technical skills and introduce them to patient care activities. The practical experience is comprised of four weeks, 35 hours per week, and is held in May/June.

AR: attendance is required

PR: successful completion of all courses in the 2nd year of the program

**3103 Microbiology of Infectious Diseases** examines the various types of micro-organisms (bacterial, viral, parasitic and fungal), the environment in which they are able to multiply and their relationship to human diseases. The classifications of their morphology, mode of reproduction and the metabolic process, the physiological and epidemiological principles of infectious diseases and their manifestations are discussed including the principles of immunization.

LH: 1; attendance is required

**3111 General Biochemistry** covers the catabolism of carbohydrates, lipids and amino acids. Mitochondria, chloroplasts and ATP synthesis. Biosynthesis of carbohydrates and lipids. Metabolic specialization of differentiated cells and tissues. Integration of metabolism.

CR: Biochemistry 3106

OR: tutorials as required

PR: PHAR 2004 or 3110 or Biochemistry 2101

**3150 Pharmacy Skills** continues the development of the learning skills necessary for pharmacy practice in order to meet the educational outcomes for the second year of the pharmacy program. Students will continue to develop skills of drug information, communication, pharmaceutical calculations and sterile product preparation relating to the courses of study in the second year. Students will complete a first aid course.

CH: 1

CO: all 2nd year Fall semester pharmacy courses

OR: practical sessions 3 hours per week; attendance is required OR: tutorials 1 hour per week

**3151 Pharmacy Skills** continues the development of the learning skills necessary for pharmacy practice in order to meet the educational outcomes for the second year of the pharmacy program. Students will continue to develop skills of drug information, communication and pharmaceutical calculations relating to the courses of study in the second year. Students will participate in practice sessions necessary to develop an understanding of and skills required in clinical kinetics.

CH: 1

CO: all 2nd year Winter semester pharmacy courses

OR: practical sessions 3 hours per week; attendance is required; tutorials 1 hour per week

PR: PHAR 3150

**3203 Medicinal Chemistry I** presents topics covering the molecular basis of action, metabolism, and toxicity of drugs. It provides an orientation to medically important nuclei and their nomenclature, followed by principles of drug discovery and development. The relationship between molecular structure and biological action of drugs together with elementary molecular modeling, and theories related to receptors and drug action will be presented. Concepts of drug metabolism and the relevant metabolic pathways in relationship to drug inactivation and toxicity, along with the principles of drug latentiation and prodrugs is covered. The structures, selected physicochemical properties, mechanism of action, structure-activity relationships, toxic effects at molecular level, and metabolism of drugs including central nervous system.

CO: Medicine 4300 and PHAR 3003

CR: PHAR 4010

OR: tutorials 1 hour per week; attendance is required

PR: Chemistry 2440

**3204 Medicinal Chemistry II** is a continuation of Pharmacy 3203 and focuses on the structures, selected physicochemical properties, mechanism of action, structure-activity relationships, toxic effects at molecular level, and

metabolism of different pharmacological classes of drugs including cholinergic agents, analgetic and anti-inflammatory agents, insulin and oral antidiabetic drugs, steroids and related compounds, antihyperlipidemic agents, histamine and antihistaminic agents, diuretic agents, angiotensin converting enzyme inhibitors and antagonists, and calcium channel blockers.

CO: PHAR 3009

CR: PHAR 4011

OR: tutorials 1 hour per week; attendance is required

PR: PHAR 3203

**3205 Pharmaceutics III** consists of several units. The standards of good manufacturing practice will be introduced. Characteristics, preparation, quality assurance and delivery systems for sterile products will be covered. The basic principles governing the application of radiation and radioactive compounds in medical diagnosis and therapy will be discussed. The status of current biotechnology-based pharmaceuticals and biotechnology related matters will be addressed.

CR: PHAR 5017

PR: PHAR 2201 and 2202

**3206 Applied Pharmacokinetics** is an introduction to biopharmaceutical and pharmacokinetic principles used in the selection, dosing, monitoring and evaluation of drug therapy. Application of these principles in evaluating drug literature and developing drug dosage regimens of selected classes of drugs for individual patients will be discussed.

CO: PHAR 3009

CR: PHAR 4006

PR: Medicine 4300, PHAR 2201 and 2202

**3301 Patient Care I** is an introductory course in patient care, especially in the areas of self-care and self-treatment and the role of the pharmacist. The regulatory environment of non-prescription products and the prevention and treatment of health conditions amenable to self-management will be discussed.

CO: PHAR 3009

CR: PHAR 4104

PR: Medicine 4300

**3501 Pharmacy Research and Evaluation I** introduces students to principle roles of health policy with a special emphasis on pharmaceutical policy and its impact on health professionals, the public and on the delivery of pharmaceutical care.

CH: 1

LC: 1

PR: PHAR 2101 and 2102

**4008 Chemotherapy** presents the principles of infectious diseases and cancer chemotherapy. Topics to be explored include molecular structure profiles in relation to mechanism of action, drug resistance, and toxicity of antimicrobial, antiviral, and antineoplastic agents. Antimicrobial activity/spectrum of activity of antibacterials, antifungals, antimalarial, antituberculosis, and antiviral/antiretroviral agents will be discussed. The classification and mechanism of action of cancer chemotherapeutic agents will be presented. Pharmacokinetic considerations, adverse effects/toxicity, and drug interactions will be explored for these agents.

CH: 2

CO: PHAR 4105

CR: PHAR 4005

LC: 2

OR: tutorials 1 hour per week

PR: Medicine 4300, PHAR 3009, 3103, 3203 and 3204

**403W Structured Practice Experience III** is a structured practice experience in community pharmacy after completion of the third year which will provide an opportunity for students to apply their technical skills and practise and participate in patient care activities. The practical experience is comprised of four weeks, 35 per week, and is held in May/June.

AR: attendance is required

PR: successful completion of all courses in the 3rd year of the program

**4105 Immunology** is an introduction to the molecular and cellular basis of immunity and hypersensitivity. Manipulation of the immune system in the management and treatment of disease is discussed.

PR: PHAR 2002 and 2003 or PHAR 3201 and 3202

**4150 Pharmacy Skills** continues the development of the learning skills necessary for pharmacy practice in order to meet the educational outcomes for the third year of the pharmacy program. Students will continue to develop skills of drug information and communication relating to the courses of study in the third year. Students will participate in practice sessions necessary to develop an understanding of and skills required in patient assessment. Students will build on their dispensing and education skills learned in first year through participating in dispensing and interview/counselling sessions in more complex patient situations. Students will learn to appreciate the challenges faced by, and in dealing with special patient populations.

CH: 1

CO: all 3rd year Fall semester pharmacy courses

OR: practical sessions 3 hours per week; attendance is required; tutorials

1 hour per week

**4151 Pharmacy Skills** continues the development of the learning skills necessary for pharmacy practice in order to meet the educational outcomes for the third year of the pharmacy program. Students will continue to develop skills of drug information and communication relating to the courses of study in the third year. Students will participate in practice sessions necessary to develop an understanding of and skills required for in-home diagnostic testing. Students will build on their dispensing and education skills learned in first year through participating in dispensing and interview/counselling sessions in more complex patient situations. Students will learn to appreciate the challenges faced by, and in dealing with special patient populations. Health promotion and illness prevention issues will be applied through an interprofessional group project.

CH: 1

CO: all 3rd year Winter semester pharmacy courses

OR: practical sessions 3 hours per week; attendance is required; tutorials 1 hour per week

PR: PHAR 4150

**4301 Patient Care II** discusses the principles of health promotion and disease prevention and the role of the pharmacist.

CH: 1

OR: tutorials 1 hour per week

**4401 Therapeutics I** is part of a series that looks at the therapeutic management of common diseases. Topics include infectious diseases, hematology/oncology, dermatology, and musculoskeletal disorders. For each disease state discussion will centre around several key issues including: the establishment of desired therapeutic outcomes; development of appropriate pharmacological and non-pharmacological therapeutic alternatives; factors to be considered to aid in the selection of an individualized therapeutic regimen; and the development of a monitoring plan to evaluate efficacy and safety.

CH: 6

CO: PHAR 4105

LC: 6

OR: tutorials 2 hours per week; attendance is required

PR: Medicine 4300, PHAR 3009 and 3206

**4402 Therapeutics II** is part in a series that looks at the therapeutic management of common diseases. Topics include womens' health, mens' health, gastroenterology, endocrine, neurological, and renal disorders. For each disease state discussion will center around several key issues including: the establishment of desired therapeutic outcomes; development of appropriate pharmacological and non-pharmacological therapeutic alternatives; factors to be considered to aid in the selection of an individualized therapeutic regimen; and the development of a monitoring plan to evaluate efficacy and safety.

CH: 6

LC: 6

OR: tutorials 2 hours per week; attendance is required

PR: PHAR 4401

**4501 Pharmacy Research and Evaluation II** introduces the biostatistical, pharmacoepidemiologic and pharmaco-economic concepts and develops the skills necessary to the practice of research and evaluation methods in applied pharmacy. The understanding of such methods is an important prerequisite in the critical appraisal of the health literature and the undertaking of evidence-based clinical practice.

PR: PHAR 3501

**4502 Pharmacy Research and Evaluation III** introduces students to principles of critical appraisal and provides opportunities to apply these principles to critique and evaluate current medical literature. Students will be assigned to a tutorial group, which will meet twice during the semester to critically appraise at least two recently published studies (journal club). Emphasis will be placed on appropriate application of critical appraisal skills and group discussion of impact of study findings on clinical practice. In addition, this course will also discuss drug utilization reviews and evaluations and the role of the pharmacist, as well as adverse drug event reporting and the role of the pharmacist.

CH: 1

LC: 1

OR: tutorials 1 hour per week; attendance is required

PR: PHAR 4501

**4503 Pharmacy Administration** introduces students to the basic principles of management as it relates to pharmacy practice. Topics will include human resources and financial management, marketing, strategic planning and the principles and issues associated with safe and appropriate drug distribution. These will be discussed from both a community and an institutional practice focus.

**5001 Human Toxicology** covers the basic principles of toxicology, including toxicokinetics, mechanisms of toxicity and the major causes of mortality; the toxicology and treatment of the drugs that are the most important human poisons; and how new drug entities are assessed and regulated for safety.

**5005 Communication & Patient Counselling** focuses on the elements of

effective interviewing and communication with patients, both written and verbal. Special approaches to selected patient populations will be discussed. Communication sessions are intended to develop self-confidence and interpersonal communication skills.

CH: 1

OR: lectures or communications sessions 2 per week for six weeks; attendance is required

**5009 Pharmacoepidemiology** covers the principles of epidemiology and its application in public health and the health services delivery system; the methods used in pharmacoepidemiologic studies; the use of pharmacoepidemiology to study the benefit risk and effectiveness of drugs; and the use of clinical trials to establish the efficacy of new drugs.

**500X Structured Practice Experience IV** provides experience in clinical practice. Students will participate as members of the health care team. They will be responsible for providing pharmaceutical care to patients. Activities will include attending patient care rounds, providing in-services and drug information, and participating in case presentations. Students will be evaluated periodically throughout the practice experience and will also be required to pass an exam. The structured practice experience is comprised of two six week modules, 35 hours per week.

AR: attendance is required

CH: 18

PR: successful completion of all course requirements for the degree and Clear Promotion

**5011 Pharmaceutical Biotechnology** - inactive course.

**5012 Pharmaceutical Analysis** - inactive course.

**5013 Hospital Pharmacy Administration** - inactive course.

**5017 Pharmaceutical Technology** examines the principles governing the development and evaluation of novel delivery systems for drugs including therapeutic proteins and peptides. The course objectives are to provide knowledge of the physicochemical and biopharmaceutical aspects of the design, use and evaluation of novel drug delivery systems with emphasis on controlled release systems for oral and percutaneous delivery. The basic principles of the application of radiation and radioactive compounds in medical diagnosis and therapy, rationale for the use, preparation and quality control of radiopharmaceuticals is also discussed.

AR: attendance is required

LH: 3

**501A/B Pharmaceutical Research** - inactive course.

**501W Seminar** consists of presentations given by students, and occasional visiting speakers, on pharmacy related topics. The final grade of PWD, PAS, or FAL is based on performance, attendance and participation.

AR: attendance is required

**5104 Therapeutics II** provides an understanding of the therapeutic management of common diseases. The student is introduced to the pathophysiologies of common disease states, current drug (prescription and non-prescription) and non-drug therapies, procedures used to monitor drug therapy for clinical response, adverse reactions, drug interactions and contraindications, and the process for distinguishing the rational from the irrational use of drugs. The appropriateness and effectiveness of self-medication treatments will also be discussed.

CH: 8

LC: 8

OR: tutorials 2 hours per week

**5150 Pharmacy Skills** continues the development of the learning skills necessary for pharmacy practice. Students will continue to develop skills of drug information and communication relating to the courses of study in the fourth year. Students will participate in discussion sessions relating to current practice issues (e.g., internet pharmacy), ethical issues in practice. Students will also complete a basic CPR course.

CH: 1

CO: all 4th year Fall semester pharmacy courses

OR: practical sessions 3 hours per week; attendance is required; tutorials 1 hour per week

**5301 Clinical Toxicology** covers the toxicology and clinical management of toxicity associated with common medications.

CH: 2

CO: PHAR 5401

CR: PHAR 5001

LC: 2

**5302 Patient Care III** focuses on pharmaceutical care considerations in special patient populations (e.g., geriatrics, neonates, pediatrics, pregnancy and lactation, critically ill, etc.). Implementation of pharmaceutical care in hospital, ambulatory and community practice settings will be discussed.

OR: tutorials 1 hour per week; attendance is required

**5303 Patient Care IV** provides the student with a basic understanding of herbal products and supplements and will focus on pharmaceutical care

considerations in using these products for the therapeutic management of common diseases.

CH: 2

LC: 2

OR: tutorials 2 hours per week; attendance is required

**5401 Therapeutics III** is part in a series that looks at the therapeutic management of common diseases. Topics include transplantation, psychiatric, respiratory and cardiovascular disorders. For each disease state discussion will center around several key issues including: the establishment of desired therapeutic outcomes; development of appropriate pharmacological and non-pharmacological therapeutic alternatives; factors to be considered to aid in the selection of an individualized therapeutic regimen; and the development of a monitoring plan to evaluate efficacy and safety.

CH: 6

LC: 6

OR: tutorials 2 hours per week

PR: PHAR 4402

**5501 Pharmacy Research and Evaluation IV** discusses the principles of critical appraisal and provides opportunities to apply these principles to critique and evaluate current medical literature. Students will be assigned to a tutorial group, which will meet twice during the semester to critically appraise at least two recently published studies. Emphasis will be placed on appropriate application of critical appraisal skills and group discussion of impact of study findings on clinical practice.

CH: 1

OR: tutorials 1 hour per week

PR: PHAR 4502

Archived Previous Calendar  
Current University Calendar available at  
[mun.ca/university-calendar](http://mun.ca/university-calendar)

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OTHER HEALTH SCIENCES

# OTHER HEALTH SCIENCES

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## 1 General Information

Because admission requirements vary significantly in different institutions and from one health science to another (e.g., Dentistry, Dental Hygiene, Physiotherapy, Occupational Therapy), interested students are advised to plan carefully and early.

The Career Planning Centre, located on the fourth floor, Room 4002 of the University Centre, can provide advice or, in some instances, arrange for students to contact other sources of more detailed information. The Centre maintains considerable information on careers in the various health fields, including guides and university calendars outlining where the programs of study are available and their entrance requirements. Interested students should consult these materials as early as possible, preferably before the Orientation Week interview and first-year registration.

## 2 Dentistry

After having consulted the Career Planning Centre, students who require further advice about dentistry prerequisites should consult Dr. Faye Murrin, Department of Biology (S4109) who has agreed to act as the faculty advisor for pre-dental students.

## 3 Physiotherapy

Physiotherapy career information is available at the Career Planning Centre. Students requiring additional assistance or advice may arrange an appointment with Janet O'Dea.

Ms. O'Dea has been designated by Memorial University of Newfoundland as a liaison person with Dalhousie University, School of Physiotherapy and as a source of advice concerning other Physiotherapy Programs in Canada. For further information contact:

Janet O'Dea

Memorial University of Newfoundland  
Room 2765, Health Sciences Centre  
St. John's, NL A1B 3V6

Telephone: (709) 777-7080

Web: [www.med.mun.ca/OTPT/](http://www.med.mun.ca/OTPT/)

## 4 Occupational Therapy

Students interested in pursuing a career in Occupational Therapy may arrange an appointment with Brenda Head, who has been designated by Memorial University of Newfoundland as a liaison person for the School of Occupational Therapy at Dalhousie University.

For further information on a career in Occupational Therapy contact:

Ms. Brenda Head

Memorial University of Newfoundland  
Room 2765, Health Science Centre  
St. John's, NL A1B 3V6

Telephone: (709) 777-7105

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# FACULTY OF ENGINEERING AND APPLIED SCIENCE

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**Dean**

Gosine, R.G., B.Eng. *Memorial*, Ph.D. *Cambridge*, P.Eng.; Winner of the President's Award for Outstanding Research, 1997-1998, Petro-Canada Young Innovator, 1998; Professor, Electrical and Computer Engineering

**Associate Dean (Graduate Studies and Research)**

Venkatesan, R., B.E.(Hons.) *Madurai*, M.Sc.E., Ph.D. *New Brunswick*, P.Eng.; Professor, Electrical and Computer Engineering

**Associate Dean (Undergraduate Studies)**

Quicoe, J.E., B.Sc. (Eng.) *Ghana*, M.A.Sc., Ph.D. *Toronto*, P.Eng.; Winner of the President's Award for Distinguished Teaching, 2001-2002; Professor, Electrical and Computer Engineering

**Director, Continuing Engineering Education**

Lye, L.M., B.Sc.(Hons.) *Bolton Inst.*, Ph.D. *Manitoba*, F.C.S.C.E., P.Eng.; Winner of the President's Award for Distinguished Teaching, 2003-2004; Professor, Civil Engineering

**Director, Ocean Engineering Research Centre**

Veitch, B.J., B.Eng., M.Eng. *Memorial*, Dr.Tech., Lic.Tech. *Helsinki*, P.Eng.; Petro Canada/Terra Nova Project Junior Research Chair in Ocean Environmental Risk Engineering, Associate Professor, Ocean and Naval Architectural Engineering; Winner of the President's Award for Outstanding Research, 2004-2005

**Manager, Finance and Administration**

Pitcher, D., B.Comm.

**Professores Emeriti**

Sharp, J.J., B.Sc., A.R.C.S.T., M.Sc. *Glasgow*, Ph.D. *Strathclyde*, F.I.C.E., F.C.S.C.E., F.E.I.C., P.Eng., C.Eng.

Walsh, J., B.Eng.(Hons.) *TUNS*, Ph.D. *Calgary*, P.Eng.

**Professor**

Meisen, A., B.Sc. *Imperial College London*, M.Sc. *Caltech*, Ph.D. *McGill*, P.Eng., F.C.I.C., F.C.A.E., F.I.E.I. Eurling; President

**Honorary Research Professors**

Clark, J.I., B.Sc. *Acadia*, B.Eng. *TUNS*, M.Sc. *Alberta*, Ph.D. *TUNS*, P.Eng.

Jordaan, I.J., B.Sc.(Eng.), M.Sc.(Eng.) *Witwatersrand*, Ph.D. *London*, P.Eng.; University Research Professor, Awarded 1997

Molgaard, J., B.Sc. *Belfast*, Ph.D. *Leeds*, P.Eng.

Swamidas, A.S.J., B.E.(Hons.), M.Sc.(Eng.) *Madras*, Ph.D., *I.I.T. Madras*, P.Eng.

**Honorary Professor**

Williams, F.M., B.A. *Toronto*, Ph.D. *Simon Fraser*

**CIVIL ENGINEERING DISCIPLINE****Chair**

Husain, T., B.Sc.Eng. (Hons.) *Aligarh*, M.Eng. *AIT Bangkok*, Ph.D. *British Columbia*, P.Eng.; Professor

**Professors**

Lye, L.M., B.Sc.(Hons.) *Bolton Inst.*, Ph.D. *Manitoba*, F.C.S.C.E., P.Eng.; Winner of the President's Award for Distinguished Teaching, 2003-2004

Marzouk, H.M., B.Sc. *Cairo*, M.Sc., Ph.D. *Saskatchewan*, FCSCE, P.Eng.

**Associate Professors**

Adluri, S.M.R., B.Tech., *J.N.T. Univ.*, M.Tech. *I.I.T. Kanpur*, M.A.Sc., Ph.D. *Windsor*

Coles, C.A., B.Eng., M.Eng., Ph.D. *McGill*

Hussein, A., B.Sc. (Eng.) *Ain Shams University*, M.Eng., Ph.D. *Memorial*, P.Eng.

Niefer, R.A., B.Sc., Ph.D. *Windsor*

Phillips, R., B.Sc.(Hons.) *Bristol*, M.Phil., Ph.D. *Cambridge*, P.Eng.; Joint appointment with C-CORE

Popescu, R., B.Sc., Ph.D. *Bucharest*, M.A., Ph.D. *Princeton*, P.Eng.

Snelgrove, K.R., B.Eng. *Memorial*, M.A.Sc., Ph.D. *Waterloo*, P.Eng.

**Assistant Professor**

Hawboldt, K.A., B.Sc. *Saskatchewan*, M.Sc., Ph.D. *Calgary*, P.Eng.; Joint appointment with Civil and Mechanical

**ELECTRICAL AND COMPUTER ENGINEERING DISCIPLINE****Chair**

Heys, H.M., B.E.Sc. *Western Ontario*, Ph.D. *Queen's*, P.Eng.; Professor

**Professors**

Bruce-Lockhart, M.P., S.B., S.M., *M.I.T.*, P.Eng.

Jeyasurya, B., B.Tech. *I.I.T. Madras*, M.Tech. *I.I.T. Bombay*, Ph.D. *New Brunswick*, P.Eng.

Moloney, C.R., B.Sc.(Hons.) *Memorial*, M.A.Sc., Ph.D. *Waterloo*; NSERC/Petro-Canada Chair for Women in Science and Engineering (Atlantic Region)

Rahman, M.A., B.Sc. (Eng.) *Bangladesh*, M.A.Sc. *Toronto*, Ph.D. *Carleton*, F.I.E.E.E., F.I.E.E., L.F.I.E., F.E.I.C., C.Eng., P.Eng.; University Research Professor, Awarded 1993

**Associate Professors**

George, G.H., B.Sc. *Southampton*, Ph.D. *Wales (U.C. Cardiff)*, Cert.Ed., (C.N.A.A.), F.R.A.S.

Gill, E.W., B.Sc., B.Ed., M.Eng., Ph.D. *Memorial*

Norvell, T.S., B.Sc.(Hons.) *Dalhousie*, M.Sc., Ph.D. *Toronto*

O'Young, S.D., B.Eng. *Saskatchewan*, M.A.Sc., Ph.D. *Waterloo*, P.Eng.

**Assistant Professors**

Ahmed, M.H., B.Sc., M.Sc., *Ain-Shams*, Ph.D. *Carleton*

Dobre, O., D.Eng., Ph.D. *Politechnica*

Iqbal, M.T., B.Sc. *UET Lahore*, M.Sc., *QAU Islamabad*, Ph.D. *Imperial College, London*, P.Eng.

Li, C., B.Eng., M.Eng. *Harbin Institute of Technology*, Ph.D. *Memorial*

Masek, V., Dipl.Ing. *University of West Bohemia*, M.Sc., Ph.D. *University of Electro-Communications, Tokyo*

Peters, D.K., B.Eng. *Memorial*, M.Eng., Ph.D. *McMaster*, P.Eng.

Vardy, A., B.Eng. *Memorial*, M.Sc. *Sussex*, Ph.D. *Carleton*; Joint appointment with Engineering and Computer Science

**MECHANICAL ENGINEERING DISCIPLINE****Chair**

Munaswamy, K., B.E., *S.V. Univ. Tirupathy*, M.Tech., Ph.D., *IIT Madras*, P.Eng.; Associate Professor

**Professors**

Boon, M., B.A.Sc., M.A.Sc., Ph.D. *Toronto*, P.Eng.

Hinchey, M.J., B.A.Sc., M.A.Sc., Ph.D. *Toronto*, P.Eng.

Seshadri, R., B.E.(Hons.) *Jabalpur*, M.Tech. *I.I.T. Madras*, M.Sc.,

Ph.D. *Calgary*, FCSME, FEIC, FASME, P.Eng.; Canada

Research Chair in Asset Integrity Management

Sharan, A.M., B.Tech., *I.I.T. Bombay*, M.S. *Wash. State*, Ph.D. *Concordia*, P.Eng.

**Associate Professors**

Fisher, A.D., B.Sc. *Queen's*, M.Eng. *McMaster*

Hookey, N.A., B.Eng. *Memorial*, M.Eng., Ph.D. *McGill*, P.Eng.

Khan, F.I., B.Sc.(Eng.) *AMU*, M.E. *IIT Roorkee*, Ph.D. *Pondicherry*

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Muzychka, Y.S., B.Eng. *Memorial*, M.A.Sc., Ph.D. *Waterloo*,

P.Eng.; Petro-Canada Young Innovator Award 2004

Shirokoff, J.W., B.Sc.(Eng.), Ph.D. *Queen's*, P.Eng.

**Assistant Professor**

Abdi, M.A., B.Sc., M.Sc. *Tehran Polytechnic*, Ph.D. *British Columbia*, P.Eng.

Hawboldt, K.A., B.Sc. *Saskatchewan*, M.Sc., Ph.D. *Calgary*,

P.Eng.; Joint appointment with Civil and Mechanical

Mann, G.K.I., B.Sc. *University of Moratuwa*, M.Sc. *Loughborough University of Technology*, Ph.D. *Memorial*; C-Core Junior Chair in Intelligent Systems

**OCEAN AND NAVAL ARCHITECTURAL ENGINEERING DISCIPLINE****Chair**

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**Professors**

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Bose, N., B.Sc., Ph.D. *Glasgow*, F.S.N.A.M.E., C.Eng., P.Eng.; Winner of the President's Award for Outstanding Research,

1992-1993; Canada Research Chair in Offshore and Underwater Vehicles Design  
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 Johansen, T.E., B.A.Sc., M.Sc. Ph.D. *University of Oslo*; Canada Research Chair in Petroleum Reservoir Engineering and Characterization

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### OIL AND GAS GROUP

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 Johansen, T.E., B.A.Sc., M.Sc. Ph.D. *University of Oslo*; Canada Research Chair in Petroleum Reservoir Engineering and Characterization  
 Khan, F.I., B.Sc.(Eng.) *AMU*, M.E. *IIT Roorkee*, Ph.D. *Pondicherry*  
 Masek, V., Dipl.Ing. *University of West Bohemia*, M.Sc., Ph.D. *University of Electro-Communications, Tokyo*  
 Muzychka, Y.S., B.Eng. *Memorial*, M.A.Sc., Ph.D. *Waterloo*, P.Eng.; Petro-Canada Young Innovator Award 2004  
 Seshadri, R., B.E.(Hons.) *Jabalpur*, M.Tech. *I.I.T. Madras*, M.Sc., Ph.D. *Calgary*, FCSME, FEIC, FASME, P.Eng.; Canada Research Chair in Asset Integrity Management  
 Veitch, B.J., B.Eng., M.Eng. *Memorial*, Dr.Tech., Lic.Tech. *Helsinki*, P.Eng.; Petro Canada/Terra Nova Project Junior Research Chair in Ocean Environmental Risk Engineering; Winner of the President's Award for Outstanding Research, 2004-2005

#### Cross-Appointment, Adjunct, Professional Affiliate

Bajzak, D., B.Sc.F., M.F. *British Columbia*, Ph.D. *Syracuse*, N.Y.; Adjunct Professor  
 Barrette, P.D., B.Sc. *Ottawa*, M.Sc. *Memorial*, Ph.D. *Laval*; Adjunct Professor  
 Byrne, R., B.Sc.(Hons.), B.Eng. *Memorial*, M.Sc., Ph.C. *Victoria*; Cross Appointment (Computer Science)

Chen, Q., B.S. *Shanghai Jiao Tong*, M.S., Ph.D. *Chinese Academy of Sciences*; Cross Appointment (Physics and Physical Oceanography)  
 Colbourne, D.B., B.Eng. *Memorial*, S.M. *MIT*, Ph.D. *Memorial*, P.Eng.; Adjunct Professor (NRC-IOT)  
 Croasdale, K.R., B.Sc.(Eng.) *London*, P.Eng.; Adjunct Professor (K.R. Croasdale & Associates Ltd.)  
 Frederking, R.M.W., B.Eng. *Alberta*, M.Sc. *London*, Ph.D. *Illinois*, P.Eng.; Adjunct Professor (Canadian Hydraulics Centre, NRC)  
 Gillard, P., B.Sc., M.Sc., Ph.D. *Memorial*; Cross Appointment (Computer Science)  
 Hawlader, B., B.Sc. Engg *BUET*, M.Eng., AIT, Ph.D. *Yokohama National*; Cross Appointment (C-CORE)  
 Jones, S.J., B.Sc., Ph.D. *Birmingham*; Adjunct Professor (NRC-IOT)  
 Kosar, K.M., B.Sc. *British Columbia*, M.Sc., Ph.D. *Alberta*; Adjunct Professor (EBA Engineering Consultants Ltd.)  
 Liu, P., B.Eng. *Wuhan Jiao Tong*, M.Eng., Ph.D. *Memorial*; Adjunct Professor  
 McKenna, R., B.Sc. *Queen's*, M.A.Sc., Ph.D. *Waterloo*; Cross-Appointment (C-CORE)  
 Navin, F., B.Eng. *McMaster*, M.Sc. *Missouri*, Ph.D. *Minnesota*; Adjunct Professor (University of British Columbia)  
 Randell, C., B.Eng. *Lakehead*, M.A.Sc., Ph.D. *Victoria*, P.Eng.; Cross Appointment (C-CORE)  
 Reinhardt, W.D., Dipl. Ing. *Technische Universitat Braunschweig*, Ph.D. *Waterloo*; Adjunct Professor (Babcock and Wilcox)  
 Sadiq, R., B.Eng. *UET, Pakistan*, M.Eng. *IPHER*, M.Eng. *KFUMP*, Ph.D. *Memorial*; Adjunct Professor (IRC/NRC)  
 Taheri, F., Dip.Eng. *St. Mary's*, B.Eng., M.A.Sc., Ph.D. *TUNIS*; Adjunct Professor (Dalhousie University)  
 Timco, G.W., B.Sc. *Brock*, M.Sc., Ph.D. *Western*; Adjunct Professor (Canadian Hydraulics Centre, NRC, Ottawa)  
 Walker, D., B.Eng., Ph.D. *Memorial*, P.Eng.; Adjunct Professor (Marineering Ltd.)  
 Williams, C., B.A.Sc.(Hons.), M.A.Sc., Ph.D. *British Columbia*; Adjunct Professor (NRC-IOT)

### OFFICE OF CO-OPERATIVE EDUCATION

#### Program Manager

Raheja, A., B.Eng. *Bangalore*, M.B.A. *Memorial*

#### Coordinators

Hudson, J.F., B.Eng. *McGill*, P.Eng.  
 Jacobs, W.K., B.Eng. *Memorial*, P.Eng.  
 Oldford, D.B., B.Sc. *Memorial*, B.Eng. *Dalhousie*

## 1 Faculty of Engineering and Applied Science

### 1.1 Engineering

Terms A, B, 1 and 2 comprise the core program taken by all students. The specialized programs of Civil, Computer, Electrical, Mechanical, and Ocean and Naval Architectural Engineering are offered in Terms 3 through 8. Where electives are available in Complementary Studies the selection must be approved by the Associate Dean (Undergraduate Studies). All electives in Terms 3 through 8 must be approved by the appropriate Discipline Chair.

### 1.2 Civil Engineering

In the nineteenth century, Civil Engineering was defined as, "The art of directing the great sources and powers of nature...for the use and convenience of man". Still valid today, the definition indicates that civil engineers are involved in serving people by providing some of the essentials (e.g. water supplies, shelter and transportation) necessary for civilized life. The oldest of the engineering professions, Civil Engineering deals with the planning, design, and construction of such things as roads, railways, harbours, docks, tunnels, bridges, buildings, water supplies, hydroelectric power development, and sewage collection, treatment and disposal systems.

The program provides a broad introduction to the scientific principles and engineering techniques necessary for an understanding of the fundamental problems tackled by civil engineers.

### 1.3 Computer Engineering

Computer Engineering is the design and analysis of computer systems applied to the solution of practical problems. It encompasses both hardware and software design in applications ranging from telecommunications and information systems to process control and avionics. Computer Engineering students learn the mathematics of discrete as well as continuous systems, the design of digital machines such as processors and memories, the fundamentals of software design, and the principles used in communications systems such as telephone networks and the Internet. Computer Engineering shares many fundamentals with Electrical Engineering, and these are covered in a common curriculum up to and including Term 4. Although students must decide to take Computer or Electrical Engineering prior to Term 3, they are not required to select between Computer and Electrical Engineering until the completion of Term 4. In Terms 5 and 6, students who have selected the Computer Engineering program will take a core appropriate to the program. In recognition of the considerable diversity of careers available to computer engineers, students are given latitude in the final three terms to choose from a wide range of electives in various speciality areas. Electives can be tailored to meet the needs of those who plan to go straight into industry as well as those who wish to join the increasing number of our graduates who are pursuing advanced degrees.

## 1.4 Electrical Engineering

Electrical Engineering is a broad field involving topics from the design of motors to the design of communication systems. Areas of study include control systems, electromagnetics and antennas, power systems, electronics, communications, and computer hardware and software. Electrical Engineering shares many fundamentals with Computer Engineering, and these are covered in a common curriculum up to and including Term 4. Although students must decide to take Computer or Electrical Engineering prior to Term 3, they are not required to select between Computer and Electrical Engineering until the completion of Term 4. Upon entering Term 5, students who have selected the Electrical Engineering program will spend a further two terms taking a core appropriate to the program. In recognition of the considerable diversity of careers available to electrical engineers, students are given latitude in the final two terms to choose from a wide range of electives in various speciality areas. Electives can be tailored to meet the needs of those who plan to go straight into industry as well as those who wish to join the increasing number of our graduates who are pursuing advanced degrees.

## 1.5 Mechanical Engineering

Mechanical Engineering is a highly diversified discipline encompassing the design, manufacture, and utilization of mechanical and thermal energy systems for the service of society. This activity requires a thorough knowledge of materials, mathematics, and the physical sciences, and an ability to apply this knowledge to the synthesis of economical and socially acceptable solutions to engineering problems.

The Mechanical Program provides students with a sufficiently general background to engage in the diverse activities of Mechanical Engineering. The judicious selection of elective courses in Terms 7 and 8 permits students who have identified specific areas of interest to direct their programs accordingly. Electives may be chosen from those designated as Mechanical Engineering or, with approval, from courses offered by other disciplines within and outside engineering. Students can thereby tailor their programs to meet career goals in areas such as research and development, industry, design, resource utilization, offshore development and ocean engineering.

## 1.6 Ocean and Naval Architectural Engineering

Ocean and Naval Architectural Engineering comprises aspects of both Naval Architecture and Ocean Engineering. Naval Architecture is primarily concerned with the design and construction of ships, offshore structures and other floating equipment and facilities. A naval architect is an engineer with the working knowledge of many disciplines and particular expertise in one or more of the specialist areas such as structures, hydrodynamics, or marine systems. Ocean Engineering extends this focus to cover virtually all aspects of engineering related to the ocean. Our ocean engineering program content introduces students to this broad field. Topics, including sub-sea systems and oceanographic science, add core ocean engineering content to the program. This is complemented by a variety of ship design and analysis courses. Together these provide a comprehensive education in ocean engineering and naval architecture.

The Ocean and Naval Architectural Engineering Program is the only accredited undergraduate program specifically in naval architecture in Canada. The program is designed both to provide highly qualified professional who can work in various ocean industry sectors such as marine transport, ship and boat building, offshore engineering, submersibles design and may related marine areas. The undergraduate program is also a comprehensive preparation for graduate studies, research and consulting in ocean engineering.

## 1.7 Continuing Engineering Education

The Faculty of Engineering and Applied Science has a firm commitment to Continuing Engineering Education. A variety of seminars and short courses are offered in St. John's and in other centres so that practising engineers may participate in Continuing Engineering programs aimed at maintaining and improving their competence.

# 2 Bachelor of Engineering Degree Program

*Note: The Faculty of Engineering and Applied Science is undertaking a major redesign of the Bachelor of Engineering programs. Students will be accepted into the first year of these new programs directly from High School starting in the Fall of 2008. In order to make the transition into the new program, students entering the Faculty from High School in Fall 2007 will undertake a modified program in their first two years (unless they qualified for direct admission to Term 1 of the current program under the Fast Track program). The first year of this program is outlined in the **Chart of the Transitional Engineering First Year Program for Students Entering First Year in the Fall 2007 (Class of 2013)**, and admission requirements and regulations are detailed under **Engineering Regulations**. For further information pertaining to the transition years and for information describing the new program, see the Faculty of Engineering and Applied Science web page at [www.engr.mun.ca](http://www.engr.mun.ca).*

Students intending to undertake the Engineering program should note that it is possible to enter Term A or Term 1 only in the Fall semester (September of each year). Attention is also drawn to the admission regulations below.

The Bachelor of Engineering Degree at Memorial University of Newfoundland is set up as a Co-operative Program, under which regular full-time academic study is alternated with equal periods of full-time work in positions related to the student's future career.

## 2.1 Program of Study

It is possible for students to pursue studies in Civil, Computer, Electrical, Mechanical, or Ocean and Naval Architectural Engineering. Students in each program may also choose to pursue offshore oil and gas engineering options in the last three terms of the program.

Courses in the engineering program are normally taken in blocks as shown in the appropriate discipline program chart. However, a student who has previously met a technical elective requirement in a given semester or wishes to defer it, may request an exemption or deferral by applying to the Associate Dean who will consult the appropriate Discipline Chair. A minimum grade of 70% is required for credit to be given towards a student's engineering program for any *technical elective* taken outside the normal blocks as shown in the charts.

A student who has previously completed a required course (or its equivalent) with a minimum grade of 70% may request an exemption by applying to the Associate Dean. A student cannot defer required courses.

In either of the above cases, a student who has been granted an exemption or a deferral will not be required to take a replacement course in that academic term and the student's promotion from that academic term will be based on the remaining courses as shown in the program chart. Notwithstanding the above, a student must maintain status as a full-time student to remain in the Engineering Program and can be exempt from or defer at most one technical elective or required course in an academic term. A student's request which has been initially denied by the Associate Dean, will be forwarded to the Faculty's Committee on Undergraduate Studies.

While it is recommended that complementary studies courses be taken as shown in the program charts, this is not a requirement except in the case of admission/promotion to Academic Term 1 which requires a course in English and a complementary studies elective to be included in the admission average.

For students admitted to the program no later than Fall 2006, the Engineering program consists of ten academic terms and six work terms. For historic reasons, the first two academic terms are designated A and B with the remaining eight being numbered one through eight. All students must complete a prescribed core of courses in the first four academic terms. Upon entering Term 3 (the fifth Academic

Term), students begin to specialize in their academic program and must select a specialization in either 1. Civil Engineering, 2. Mechanical Engineering, 3. Ocean and Naval Architectural, or 4. Electrical and Computer Engineering. Upon entering Term 5, students in Electrical and Computer Engineering must select either the Electrical or Computer Engineering program. Some of the courses offered in Academic Terms 3 to 8 are taken by all students, others are offered for more than one program, but most technical courses in Academic Terms 3 to 8 are specific to the individual programs. Students should refer to the charts preceding this section for the detailed course requirements in each phase of their program.

General Management of the work terms in the Co-operative Engineering Program is the responsibility of the Faculty Office of Co-operative Education. The Office, through its coordinators, is responsible for assisting potential employers to become involved in the program, for the continual development of employment opportunities, for counselling of students, for monitoring them on their work assignments and for the evaluation of the work term.

There is an "Engineering Profession Seminar" which is a three hour seminar offered in the fall term to Term 1 students. Issues include, but are not limited to: professional practice, gender issues, bearing of the Professional Engineers and Geoscientists of Newfoundland and Labrador code of ethics on students' behaviour.

Public and personal safety concerns are developed in the student through a number of avenues. Special non credit seminars by the Office of Co-operative Education are given to the Term 2 students which introduce the student to the work environment and include discussion on occupational health and safety legislation. During the Winter semester a one-day first-aid course is conducted which is a compulsory component of the engineering program. A student may be exempted from the requirement if evidence of previous first-aid certification is provided.

Students must satisfy the first-aid and the health and safety requirements or receive an exemption from the Committee on Undergraduate Studies of the Faculty to be permitted to register for Academic Term 3.

By being exposed to the world of work, under supervision, during their academic careers, students are provided with a broader and richer preparation for life and work. The experience gained in the industrial and professional environment should give them maturity and breadth of understanding, so enabling them to define more clearly their educational and career interests and objectives. Much of the experience gained in this type of program would not be available to students until after graduation in a conventional program. This experience makes a significant contribution to their total education.

During work terms students are brought into direct contact with the engineering profession, exposed to actual practical problems, expected to assume ever increasing responsibility in employment as their education advances, and introduced to engineering projects and installations far beyond the scope of those which could be provided in the University. The experience should provide maturing prospective engineers with an early appreciation of the economic, social and personal aspects of Engineering through direct association with professionals in a technical environment.

Matching between students and employers is accomplished through a placement process which is the responsibility of the Office of Co-operative Education. Job notices are posted and students may apply for up to twelve interviews. Employers' representatives interview students, after which the employers rank students in order of preference.

Job offers are made to students based on employer rankings. Students are then placed to fit expressed preferences. The Faculty does not guarantee placement, but every effort is made to ensure that appropriate employment is made available. In the case of students who are required to withdraw from the program, the Faculty has no responsibility for placement until they have been re-admitted to the program.

Salaries paid to co-operative students are determined within the employer's own wage structure, and can be expected to increase as the student progresses through the program and assumes more responsibility. However, students should not expect the income from work terms to make them completely self-supporting.

Students in the Co-operative Program give permission to prospective employers, in the course of the interview process, to have access to their records, which contain their academic marks and their work term evaluations. After placement, students may not withdraw from a specific job situation unless prior permission is obtained from the Office of Co-operative Education.

The Co-operative Program affords an excellent preparation for a career requiring such high standards of professional judgement.

Upon the successful completion of the undergraduate program in Engineering as approved by the Faculty Council and Senate, candidates will be awarded the degree of Bachelor of Engineering.

### 2.1.1 Complementary Studies Courses

It is clear that our society is becoming increasingly dependent on technology. This imposes the requirement that Professional Engineers not only be technically able but also be prepared to exercise social responsibility in the execution of their work. Course projects oriented toward professional practice, the work terms, the complementary studies component of the academic curriculum and a continuing emphasis on public and personal safety throughout the entire program help to develop responsible attitudes. Moreover, the students learn to communicate effectively with their colleagues, other professionals and the rest of the community on issues extending beyond specialized technical matters.

The Complementary Studies component has been developed to make students aware of the function and responsibilities of the Professional Engineer in society and the impact that engineering in all its forms has on environmental, economic, social and cultural aspects of our society. This complements the technical expertise and communications skills developed and practised in all components of the program.

Students who have previously met a complementary studies requirement before the semester in which it is scheduled and students who wish to defer a complementary studies requirement to a later semester, may request an exemption or deferral by applying to the Associate Dean (Undergraduate). Students who have been granted an exemption or a deferral will not be required to take a replacement course in that term and their promotion from that academic term will be based on the remaining technical courses.

The Complementary Studies component is the same for all programs and consists of a minimum of 21 credit hours as follows:

1. **Term A or B** (3 credit hours): English 1080 (or equivalent) or English 1020
2. **Terms A and B** (6 credit hours): Two complementary studies electives chosen from lists provided by the Office of the Associate Dean (Undergraduate). These courses are drawn from the humanities, social sciences, arts and management and one of these courses is intended to provide experience with writing.
3. **Term 1** (3 credit hours): Complementary studies elective chosen from a list provided by the Office of the Associate Dean (Undergraduate). This course must be second year or higher and it is intended to provide experience with the central issues, methodologies and thought processes of the humanities and social sciences.
4. **Term 4** (3 credit hours): Engineering Economics - Engineering 4102
5. **Term 5** (3 credit hours): The Engineering Profession - Engineering 5101
6. **Term 6** (3 credit hours): One of: Engineering 6101, Sociology 2120, Philosophy 2801, or Women's Studies 4107



- For graduation, students must pass each of the seven complementary studies courses described in sections 1 - 6 and they must obtain at least a 60% average across these courses.

## 2.2 Computing Foundations

Engineering students are expected to have a firm foundation in the fundamentals of using computers. Recognizing that students' backgrounds may vary widely, the Faculty offers workshops from time to time, directed particularly towards students in Term 1 and 2. Attendance at workshops is voluntary; it is each individual student's responsibility to ascertain whether or not they require the material on offer. Once a workshop has been given, however, it will be assumed all students have a competence in the material taught.

## 3 Master of Engineering Fast-Track Option

Students registered in academic term 7 of a Memorial University of Newfoundland undergraduate engineering program are eligible to apply for admission to a Master of Engineering fast-track option. The purpose of the option is to encourage students interested in pursuing graduate studies to begin their graduate program while still registered as an undergraduate student. While enrolled in the option, a student may complete some of the Master of Engineering Degree requirements and, hence, potentially be able to graduate earlier from the Master of Engineering Degree Program. For further details and the regulations regarding the option, refer to the regulations governing the degree of Master of Engineering.

## 4 Engineering Regulations

A student may appeal against any decision of the Faculty as indicated below, and any Faculty regulation may be waived by Faculty Council or, on behalf of the Council, by the Appeal Committee or Committee on Undergraduate Studies of the Faculty, as follows, provided that no **UNIVERSITY REGULATIONS - General Academic Regulations (Undergraduate)** is contravened by the waiver. Appeals, and applications from students for a waiver or other variance of the Engineering and Applied Science Regulations, must be submitted in writing to the Office of the Associate Dean (Undergraduate) for submission to the appropriate committee. Unless otherwise stated in the pertinent portion of the Regulations, the time limit for an application for the waiver or other variance, is as stated below in this Note.

- A waiver of an admission requirement may be granted by the Committee on Undergraduate Studies upon recommendation by the Faculty Admissions Committee.
- Appeals against decisions of the Faculty Admissions Committee and appeals against promotion decisions of Faculty Council will be considered by the Faculty Appeal Committee. An appeal against promotion decisions of Faculty Council will normally only be considered upon presentation of evidence which has not been placed before Faculty Council. Any such appeal must be made within one month of the issue of the decision of the Admission Committee or within one month of the issue of results by the Registrar, as the case may be. When a student has requested a re-read of an examination paper which may affect an appeal that appeal must nevertheless be made within one month of the issue of the original results, and consideration of the appeal will be delayed until the result of the re-read is available.
- Except as noted in 4. below, a request for exemption from a course or courses required in the Engineering program, the substitution of a course by another course, or any other variation of the requirements of the academic terms, will be considered by the Faculty Committee on Undergraduate Studies upon recommendation by the Associate Dean (Undergraduate) in an application concerning Core courses, or upon recommendation by the relevant Discipline Chair concerning all other courses. Any such request must be received at least one week before the last day to add courses in the semester in question.
- With sufficient justification, students in academic terms 7 and 8 may be permitted to substitute one of the listed technical electives in each term with an appropriate course from another engineering program or another academic unit within the University. Such a substitution requires the permission of the appropriate Discipline, which will normally consider whether the substitution is consistent with the student's program and career objectives as well as whether the substituted course is suitable for a final year engineering student. In such cases, it is the student's responsibility to make sure he/she is qualified to register for the proposed course.
- A request for exemption from a work term, and for any other variation in the requirements for the work terms, will be considered by the Faculty Committee on Undergraduate Studies, upon recommendation by the Office of Co-operative Education. Any such request must be received before or on the last day to drop courses without academic prejudice in the semester in question. Only when the circumstances which may justify a variance in the requirements occur unavoidably after this drop date, will a later application be entertained, at the discretion of the Committee.
- An appeal against a decision by the Faculty Appeal Committee or by the Committee on Undergraduate Studies of the Faculty should be directed to the Senate Committee on Undergraduate Studies.

### 4.1 Admission Modes

As a result of the program changes planned to take effect in the 2008-09 academic year, admission regulations have been modified for students entering Engineering programs in Fall 2007 and beyond.

- For students seeking admission to Fall 2006 or earlier
  - Direct Entry:** Students may apply for direct entry into first year Engineering when they apply to the University from high school. Direct admission from high school is normally based upon the student being admitted to the University and having sufficient prerequisites in Mathematics and the Physical Sciences to be able to complete First Year Engineering courses in their first year of University.
  - Fast Track:** Exceptionally well prepared students may apply for direct entry into second year Engineering (Term 1) from high school. Direct admission into second year is normally based upon a student being admitted to the University, having advanced placement equivalent to University credit in Physics, Mathematics and Chemistry and having an admission average of at least 80% in the final year of high school.
  - Entry from within the University:** Students registered in other programs within, or other campuses of, the University may apply for entry into second year Engineering (Term 1). Such entry is normally based upon the same criteria as promotion from first year Engineering into second year (see section 5) under Examinations and Promotions.
  - Bridging Programs:** The Faculty of Engineering and Applied Science has bridging programs which allow certain diploma graduates to enter the Engineering program with advanced standing. In each case the bridging program consists of two academic terms: Fall and Winter semesters, followed by entry into Academic Term 4 of the appropriate discipline. To be admitted to the bridging program students must have graduated from the diploma program with a cumulative average of at least 75%. The currently approved bridging programs are:
    - Civil Engineering Technology from the College of the North Atlantic to the Civil Engineering Program.

- Electrical Engineering Technology or Electronics Engineering Technology from the College of the North Atlantic to the Electrical or Computer Engineering Program.
- Mechanical Engineering Technology (Power) or Mechanical Engineering Technology (HVAC) from the College of the North Atlantic to the Mechanical Engineering Program.
- Naval Architecture Program or Marine Systems Design Program at the Fisheries and Marine Institute of Memorial University of Newfoundland to the Ocean and Naval Architectural Engineering Program.
- Techniques d'architecture navale at the Institut maritime du Québec, Rimouski, to the Ocean and Naval Architectural Engineering Program.

Details of individual course requirements are outlined in the preceding charts.

- e. **Other Entry:** Students are occasionally admitted to later terms in Engineering from other institutions. Such entry is normally based on a detailed analysis of the student's record and is handled on a case by case basis.
2. For students seeking admission to Fall 2007 (transition year)
- a. **Direct Entry:** Students may apply for direct entry into first year Engineering when they apply to the University from high school. Such admission is on a competitive basis for a limited number of seats. The minimum requirements for direct admission from High School are general admission to the university and eligibility for registration in the following courses, by satisfying the prerequisites specified by the respective departments: Physics 1050, Chemistry 1050 and Math 1000. Meeting these minimum requirements does not, however, guarantee admission to the program.
- b. **Fast Track:** Exceptionally well prepared students may apply for direct entry into second year Engineering (Term 1 of the Class of 2012 program) from high school. Direct admission into second year is normally based upon a student being admitted to the University, having advanced placement equivalent to University credit in Physics, Mathematics and Chemistry having an admission average of at least 80% in the final year of high school.
- c. **Entry from within the University:** Students registered in other programs within, or other campuses of, the University may apply for entry into Engineering. Students applying for admission to Term 1 of the program in Fall 2007 only (Class of 2012) will be admitted using the same criteria as promotion from first year Engineering into second year (see section 5 under Examinations and Promotions). For other students entry is on a competitive basis for a limited number of seats. Minimum requirements are to have satisfied the same criteria as for promotion to the relevant term of Engineering under Examinations and Promotions.
- d. **Bridging Programs:** The Faculty of Engineering and Applied Science has bridging programs which allow certain diploma graduates to enter the Engineering program with advanced standing.

To be admitted to the bridging program students must have graduated from the diploma program with a cumulative average of at least 75%.

The currently approved bridging programs are:

- Civil Engineering Technology from the College of the North Atlantic to the Civil Engineering Program.
  - Electrical Engineering Technology or Electronics Engineering Technology from the College of the North Atlantic to the Electrical or Computer Engineering Program.
  - Mechanical Engineering Technology (Power) or Mechanical Engineering Technology (HVAC) from the College of the North Atlantic to the Mechanical Engineering Program.
  - Naval Architecture Program or Marine Systems Design Program at the Fisheries and Marine Institute of Memorial University of Newfoundland to the Ocean and Naval Architectural Engineering Program.
  - Techniques d'architecture navale at the Institut maritime du Québec, Rimouski, to the Ocean and Naval Architectural Engineering Program.
- e. **Other Entry:** Students are occasionally admitted to later terms in Engineering from other institutions. Such entry is normally based on a detailed analysis of the student's record and is handled on a case by case basis.

## 4.2 Admission

1. All complete applications for admission or readmission to the Faculty of Engineering and Applied Science must be submitted to the Office of the Registrar. A complete application includes an application to Engineering, an application to the University (for those who have not registered for courses in Memorial University of Newfoundland in either of the two preceding semesters) and supporting documentation (when necessary). Application forms are available at the Office of the Registrar and the General Office of the Faculty of Engineering and Applied Science. Applications to Term A or Term 1 should be submitted no later than March 1st of the year in which admission is sought. The Faculty Admissions Committee will begin reviewing applications after this date.

Note: *Students intending to register for courses at this University or at another institution during the summer months who are considering entry into Engineering must still apply by March 1st.*

Applications for all subsequent terms should be submitted at least two months prior to the commencement of that term. Any application received after the relevant deadline will be considered as time and space permit.

Attention is also drawn to the subsequent admission regulations and to the fact that readmission to the University does not necessarily constitute admission to Engineering.

2. Admission to the Faculty of Engineering and Applied Science is on the basis of a competition for a limited number of places. The primary criterion used in reaching decisions on applications for admission is the Admission Committee's judgement of the likelihood of an applicant succeeding in the program.

Meeting the minimum requirements for admission does not guarantee acceptance into the program.

Subsequent entry into a specialized program within the Faculty of Engineering and Applied Science (Civil, Electrical, Computer, Mechanical, Ocean & Naval Architectural) is also on the basis of a competition for a limited number of places.

Success in the program depends on meeting the requirements of both academic and work terms. The Admissions Committee will assess the likelihood of an applicant being able to meet the promotions requirements outlined below.

The Faculty expects students admitted to the program to have and retain the knowledge and skills corresponding to the admission criteria listed in these regulations. This grounding in mathematics and the sciences, and the ability to communicate in writing and orally are the foundation of all the academic courses and the work terms in the program. The student is expected to build on this foundation, developing the technical and communication skills expected of a professional engineer. The Faculty may require confirmation, through an interview or other means, that an applicant is able to meet the expectations of the Faculty in this respect.

A student of engineering should be able to obtain a work term position through the job competition for each work term but the University does not guarantee to place the student in a full-time paid position in each work term. Placement will depend on the availability of positions and choices made by both employers and students. Employers are only likely to offer positions to students

who can demonstrate the academic and personal qualities which fit them for the work concerned. Students must be able to communicate in job applications and interviews and as required during the work term. Some assistance in the strengthening of communication skills is available for all students in the Faculty and in particular for students who initially have some difficulty in meeting these requirements. Nevertheless a student who cannot meet the demands of the job competition may be required by the Faculty to withdraw until he or she can demonstrate an ability to continue in the program.

3. In evaluating applications the Admissions Committee takes into account the strengths and weaknesses in a candidate's academic background, and motivation towards obtaining an engineering degree. Students with weak overall academic records are unlikely to be admitted.
4. Applicants seeking admission through transfer from another institution must have achieved an equivalent standing in comparable subjects. The applicant is responsible for having certified documentation to this effect forwarded from the relevant institution(s) to the Office of the Registrar.
5. Students from areas where English is not the common language must provide certified translations of documentation and may be required to prove, by test, their proficiency in English.
6. An applicant for admission with advanced standing is responsible for having certified documentation attesting to his or her academic and relevant work experience forwarded from the university(s) or institution(s) previously attended to the Office of the Registrar. Each such application when complete will be considered by the Faculty Admissions Committee. No applicant will be admitted beyond Term 5. Because of the importance of the work experience in the cooperative program three work terms are considered an absolute minimum requirement.
7. An applicant of mature age who has been away from full-time formal education for at least four years may be admitted, if the applicant can satisfy the Admissions Committee that he or she has the knowledge and capability to succeed in the program. This knowledge may, for instance, have been acquired in studies to a sufficiently high level in engineering or another discipline.
8. Engineering students to whom promotion is denied are no longer in the Engineering program. Subject to Sections 12 and 14 of the regulations on Examinations and Promotions, such students may be permitted to repeat unsuccessful terms. Those wishing to do so must apply for readmission in accordance with the Faculty and University readmission regulations. These applications will be judged by the Faculty Admissions Committee.

### 4.3 Examination and Promotion

1. The Faculty constitutes the examining body for all engineering examinations. The standing of every student will be assessed at the end of each academic term beyond Terms A and B and at the end of each Work Term by Faculty Council. The decisions of Faculty Council will be issued to individual students by the Registrar. The status of students in Terms A and B will be governed by the **UNIVERSITY REGULATIONS - General Academic Regulations (Undergraduate)** of the University.
2. Any student has the right to appeal any decision made by the Faculty in regard to his or her promotion. Any such appeal must be made in writing to the Chairman of the Appeals Committee, Faculty of Engineering and Applied Science, within one month of the issue of results by the Registrar.
3. To be promoted a student must, in addition to obtaining the requisite marks and average, complete and deliver all laboratory, project work, and work reports as required.
4. The Faculty Council or the Appeals Committee of the Faculty of Engineering and Applied Science may promote a student notwithstanding promotion requirements given below. A decision of this nature will be made only for reasons acceptable to Faculty Council or the Appeals Committee as appropriate, and in the case of a student thought likely to succeed in future terms.

#### 4.3.1 Academic Terms

1. Students registered in Engineering for academic Term B must have completed a minimum of 30 credit hours before Fall 2007 and satisfy the following criteria to be able to be promoted to academic Term 1 in Fall 2007:
  - a. The student must obtain credit in each of the following courses: English 1080 (or equivalent) or English 1020, Chemistry 1051 (or equivalent), Physics 1051 (or equivalent), and Mathematics 1001.
  - b. The student must obtain 3 credit hours in each of Chemistry, Physics, and Mathematics, in addition to those specified in a.
  - c. The student must obtain 9 credit hours in addition to those specified in a. and b. At least 6 credit hours of these must be complementary studies electives (found under **Complementary Studies Courses**). Students who have completed only 3 credit hours in complementary studies may be admitted to the program in which case they will be required to obtain 3 more credit hours prior to graduation.
  - d. The student must obtain an average of 65% in the set of courses comprising Chemistry 1051 (or equivalent), Physics 1051 (or equivalent) and Mathematics 1001, English 1080 (or equivalent) or English 1020, and 3 credit hours of complementary studies.
  - e. The student must obtain at least 60% in each of Chemistry 1051 (or equivalent), Physics 1051 (or equivalent), and Mathematics 1001.
2. Students registered in the transitional first year Engineering program in the 2007-08 academic year must have completed a minimum of 30 credit hours and satisfy the following criteria to be able to be promoted to the second year of the transitional program:
  - a. The student must obtain credit in each of the following courses: English 1080, (or equivalent) or English 1020, Chemistry 1050 (or equivalent), Physics 1050 and 1051 (or equivalent), Mathematics 1000, 1001 and 2050, and Engineering 1313 and 2420.
  - b. The student must obtain 3 credit hours in addition to those specified in (a) in a complementary studies elective chosen from the arts, humanities, social sciences and management and approved by the Associate Dean (Undergraduate) of the Faculty of Engineering and Applied Science. A list of approved courses is maintained by the Office of the Associate Dean (Undergraduate) of the Faculty of Engineering and Applied Science and is available at [www.engr.mun.ca](http://www.engr.mun.ca). The 3 credit hours must be chosen from List A on the web site.
  - c. The student must obtain an average of at least 65% in the set of courses listed in a. and b.
  - d. The student must obtain at least 60% in each of Chemistry 1050 (or equivalent), Physics 1051 (or equivalent), Mathematics 1001, and Mathematics 2050.
  - e. Students admitted to the program in Fall 2007 and who fail to meet the above criteria during the 2007-08 academic year will not be considered to be in the Engineering program and must apply for readmission to the program.
3. For the purposes of promotion extra courses required of students as a condition of entry directly into academic Term 1 (or later) will be considered part of their program.
4. At the end of any academic Terms 1 to 7, a student must have an average in the technical courses taken in the current academic term (all courses except those defined in the section **Complementary Studies Courses**) of at least 60% to continue in the program.

Students with an average of at least 60% and with a mark of at least 50% in each technical course taken as part of their program will be given a clear promotion. Students with an average of at least 60% and with one or more marks below 50% in technical courses taken as part of their program will be given a probationary promotion.

5. At the end of the academic Term 8, a student must have an average in the technical courses taken in academic Term 8 of at least 60% with a mark of at least 50% in each technical course taken as part of the program and a 60% average in the seven complementary studies courses described in the section **Complementary Studies Courses**, to be recommended for graduation. A student with an average of at least 60% and with one or more marks below 50% in technical courses taken as part of the program will be given a probationary status. A student with a probationary status at the end of academic Term 8 will not be recommended for graduation until the student's status is transferred to that of a clear promotion.
6. Transfer from a probationary status to a clear promotion or, in the case of academic Term 8 to be recommended for graduation, will entail satisfying the Faculty that the student is competent in the subject of the course in which the student has failed to achieve 50%. In the case of engineering courses, this will normally entail re-examination, upon which the student will be declared to have passed or failed a test of competency in the subject concerned, without the assignment of a numerical grade on the test. Non-engineering technical courses which have been failed will normally have to be repeated or replaced with an alternate course.
7. A student with a probationary promotion at the end of academic Term 1 will be re-examined in the subject matter of the failed course(s) no later than the 1st week of the subsequent semester. A student who is successful in all the required re-examinations will be promoted to academic Term 2.  
Failure to submit to re-examination or a failure in re-examination will result in denial of promotion.
8. A student with a probationary promotion at the end of academic Terms 2 to 7 will continue to the subsequent work term. However, entry into the next academic term will normally be allowed only when the Faculty is satisfied, through the re-examination provided for in Clause 9, that the student is competent in the subject matter of the failed courses.
9. A re-examination after academic Terms 2 to 8 will be at a time determined by the Faculty, but not later than the first week of the second semester after the semester in which the course was failed. Failure to submit to the re-examination or failure in the re-examination will result in denial of promotion or, in the case of course failures in academic Term 8, denial of a recommendation for graduation.
10. Re-examination may be deferred, subject to the **UNIVERSITY REGULATIONS - General Academic Regulations (Undergraduate)** governing deferred final examinations; however, a student who is successful in a deferred re-examination may not be permitted to register for the subsequent academic term if the deferred re-examination is after the normal registration period for that term.
11. Students denied promotion with an average mark below 60% may be readmitted to the program and will normally be required to repeat all the work of the term, including courses which have been passed. With the permission of the Faculty Committee on Undergraduate Studies, an elective course may be replaced by a course deemed to be equivalent.
12. Students denied promotion with an average mark of at least 60% will be required to repeat just the failed courses, in a semester when the courses are normally offered (along with other courses in the University if the student so wishes).
13. A student may not repeat a given academic term more than once when repetition is due in part or entirely to a failure to achieve the average mark required for promotion, and a student may not repeat more than two academic terms in the entire program for which repetition is required for this reason. Academic terms or courses repeated because of failure to achieve a pass mark in individual courses, while the required overall average for the term was achieved, are excluded from this prohibition.
14. Students may be required to withdraw from the program at any time if, in the opinion of the Faculty Council, they are unlikely to profit from continued attendance.
15. For clear promotion during a bridging program, students are required to have an overall average in each semester of at least 60%, and 50% in each subject. Students who fail one or more subjects but maintain an overall average of 60% qualify for a probationary promotion, subject to a re-examination in the failed subjects.

Students promoted from the Winter Term of a bridging program will be admitted to Term 4 of the appropriate Engineering Program.

#### 4.3.2 Work Terms

1. Work terms are scheduled in the "Plan of Operation for the Co-operative Engineering Program". Work terms and academic terms must be completed in the sequence shown. The dates for starting and finishing each work term are shown in the University Diary. Successful completion of the work term requirements is prerequisite to graduation.
2. A competition for work term employment is organized by the Office of Co-operative Education as outlined in the *Co-operative Student Handbook* which can be obtained at [www.mun.ca/coop/home/engineering.php](http://www.mun.ca/coop/home/engineering.php). Students are encouraged to spend two consecutive work terms with a given employer provided suitable work is available.
3. Students may obtain their own work term jobs outside the competition. Such jobs must be confirmed by letter from the employer and approved by the Office of Co-operative Education on or before the first day on which the student commences work.

A student may, with the permission of the Office of Co-operative Education, be self employed during a work term, provided that the student and the Office of Co-operative Education agree at the start of the work term on the information to be provided to the Office so that it can evaluate the student's work during the term.

A student who is unable to obtain a work term job or work in approved self employment within four weeks from the start of the work term will be expected to undertake work under contract to a client within the Faculty, another entity in the University, a company, municipality, non-profit organization, or the like. The contract work may be part-time, or occupy only a portion of the semester, and may allow the student to earn an income in other ways. The contract, whether paid or unpaid, must be approved by the Office of Co-operative Education.

When neither an approved full-time work position nor an approved contract has been obtained in work Terms 1, 2, or 3, the Faculty Committee on Undergraduate Studies may approve a program which provides the affected students with technical and professional experience expected in these work terms. The program must be such that the development of the students' technical and professional development, including the development of the students' communication skills, through the program can be monitored and assessed by the Office of Co-operative Education with criteria equivalent to those used for full-time paid work term positions. Normally, a student may not take part in this type of program more than twice.

4. A student may be exempted from any work term requirements if he or she submits medical and/or other evidence to support such exemption, to the Committee on Undergraduate Studies through the Office of Co-operative Education. Also see Note 5. under Engineering Regulations.
5. A communication component must be completed for each work term. The communications requirement for each work term is specified in the course description for the work term and is covered in more detail in the Co-op Student Handbook. The actual format will depend on the specific requirements of the Faculty for the work term. If an employer designates a written report to be confidential, a non-disclosure agreement must be completed to legally protect the confidential material. Written documents must be

submitted on or before the deadline date shown in the University Diary. Presentations, when required, will normally be given at the University at a time arranged by the Faculty Office of Co-operative Education.

6. The overall evaluation of the work term is the responsibility of Engineering Co-operative Education. Work term grades are submitted to the Faculty Council of Engineering and Applied Science at the end of each work term. The work term evaluation consists of two components: student work term performance as evaluated by a co-ordinator, given input from the employer, and a communications component evaluated by a co-ordinator or delegate. Each component is evaluated separately.

Evaluation of the work performance will result in one of the following classifications: **OUTSTANDING, ABOVE EXPECTATIONS, SATISFACTORY, MARGINAL PASS, FAIL..**

Evaluation of the communications component will result in one of the following classifications: **OUTSTANDING, ABOVE EXPECTATIONS, SATISFACTORY, MARGINAL PASS, FAIL.**

Both, the evaluation for work performance and the evaluation of the communications component are recorded on the transcript.

Overall evaluation of the work term will result in the assignment of one of the following final grades:

- Pass with Distinction:* To receive a **PASS WITH DISTINCTION**, a student must obtain an evaluation of **OUTSTANDING** in both the communications and work performance components of the work term.
- Pass:* To receive a **PASS**, a student must achieve an evaluation of **MARGINAL PASS** or better in the communications component and in the performance component of the work term.
- Fail:* A student receiving a **FAIL** in either the communications or performance component of the work term will receive a **FAIL**.

For promotion from the work term, a student must obtain **PASS WITH DISTINCTION** or **PASS**.

The nomenclature of the various communications requirements is as follows:

Work Term 1: Conjoint Report (which consists of a Daily Diary and one of a Portfolio, Weekly Journal, or Descriptive Technical Report)

Work Term 2: Industry Company Profile

Work Term 3: Descriptive Technical Report

Work Term 4: Technical Oral Presentation

Work Term 5: Analytical Technical Report

Work Term 6: Technical Report

7. Students who fail a work term will normally repeat that work term in a work situation approved by the Office of Co-operative Education. A given work term may be repeated only once, and not more than two work terms may be repeated in the entire program.

Notwithstanding the above, a student who does not achieve a passing grade and who in the opinion of the Faculty Council can benefit from a remedial program, may be permitted an extension of time not to exceed the end of the Regular Registration Period of the subsequent semester to complete the requirements of the work term.

8. Students who fail to honour an agreement to work with an employer, or who leave the co-operative employment without prior approval of the Office of Co-operative Education, or who conduct themselves in such a manner as to cause their discharge from the job, will normally be awarded a Failed Work Term.

Note: *Students should also refer to the UNIVERSITY REGULATIONS - General Academic Regulations (Undergraduate) of the University.*

## 5 Program Charts

Chart of the Undergraduate Engineering Core Program for Students Entering Term A in Fall 2006 (Class of 2012)

Term A	Term B	Term 1	Term 2
Mathematics 1000	Mathematics 1001	Engineering 1405	Engineering 2422
Chemistry 1050 or equivalent	Chemistry 1051 or equivalent	Complementary Studies Course	Engineering 2205
Physics 1050 or equivalent	Physics 1051 or equivalent	Engineering 1313	Engineering 2313
Elective	Elective	Engineering 1333	Engineering 2420
English	Elective	Engineering 1504	Engineering 2503
		English (this is an additional course required for Fast Track students)	Complementary Studies Course (this is an additional course required for Fast Track students)

Note: *Two of these three electives must be complementary studies electives and the other is a free elective. Courses in Terms A & B are taken on a credit basis. Terms 1 and 2 must each be passed on a block average.*

Chart of the Transitional Engineering First Year Program for Students Entering First Year in Fall 2007 (Class of 2013)

Transitional Term A	Transitional Term B
Mathematics 1000	Mathematics 1001
Chemistry 1050	Mathematics 2050
Physics 1050	Physics 1051
English 1080	Engineering 2420
Engineering 1313	Complementary Studies Course

Note: *Students completing the Transitional Engineering First year Program will enter the Transitional Term 1 and Term 2 in the second year. The Chart of the Transitional Engineering Second Year Program will be posted on the Engineering website at [www.engr.mun.ca](http://www.engr.mun.ca) following approval by Senate.*

**Chart of the Bridging Program for Civil Engineering**

Fall Term	Winter Term
Engineering 1405	Engineering 2422
Engineering 3423	Engineering 2205
Earth Sciences 3610	Engineering 2313
Engineering 3731	Engineering 2420
English	Complementary Studies Course

**Chart of the Bridging Program for the Electrical and Computer Engineering Program**

Fall Term	Winter Term
Engineering 1405	Engineering 2422
Engineering 1313	Engineering 2313
Engineering 3821	Engineering 2205
Engineering 3861	Engineering 2510
Engineering 3891	Engineering 2320
English	Complementary Studies Course

Note: Students from the Electrical and Computer Engineering Technology program are required to take a course in structured programming at the College of the North Atlantic before admission into the Bridging Program.

**Chart of the Bridging Program for the Mechanical Engineering Program**

Fall Term	Winter Term
Engineering 1405	Engineering 2422
Engineering 3901	Engineering 2205
Engineering 3933	Engineering 2313
Engineering 3205	Engineering 2420
English	Complementary Studies Course

**Chart of the Bridging Program for Ocean and Naval Architectural Engineering**

Fall Term	Winter Term
Engineering 1405	Engineering 2422
Engineering 3423	Engineering 2205
Engineering 3901	Engineering 2313
Engineering 3205	Engineering 2420
English	Complementary Studies Course

## Civil Engineering Curriculum Chart

Fall	Spring	Winter	Fall	Spring	Winter
Term 3	Term 4	Term 5	Term 6	Term 7	Term 8
Engineering 3610	Engineering 4102	Complementary Studies Elective	3 credit hours from Engineering 6101, Philosophy 2801, Sociology 2120, or Women's Studies 4107	Engineering 7704	Engineering 8700
Engineering 3703	Engineering 4312	Engineering 5312	Engineering 6705	Engineering 7713	Engineering 8749
Engineering 3844	Engineering 4322	Engineering 5708	Engineering 6723	Engineering 7745	9 credit hours from: Engineering 8705, 8751, 8713, 8717, 8746, or 8790-8791
Engineering 3423	Engineering 4717	Engineering 5713	Engineering 6713	6 credit hours from: Engineering 7706, 7748, 7716, 7723, or 7718	
Engineering 3731	Engineering 4422	Engineering 5706	Engineering 6707		
Complementary Studies Elective (Fast Track)	Engineering 4723	Engineering 5434	Engineering 6740		

Notes: 1. Some of the technical electives listed above may not be offered every year. A list of the current offerings is available from the Discipline Chair and the Associate Dean (Undergraduate).  
2. From time to time, a technical elective may be offered in a term other than indicated on the above chart.

## Civil Engineering - Offshore Oil and Gas Option (OUGE)

Fall	Spring	Winter	Fall	Spring	Winter
Term 3	Term 4	Term 5	Term 6	Term 7	Term 8
Engineering 3610	Engineering 4422	Complementary Studies Elective	Engineering 6705	Engineering 7748	Engineering 8600
Engineering 3703	Engineering 4102	Engineering 5708	Engineering 6723	Engineering 7706	Engineering 8749
Engineering 3423	Engineering 4312	Engineering 5312	Engineering 6740	Engineering 7704	3 credit hours from: Engineering 8705, 8751, 8713, 8717, 8746, or 8790-8791
Engineering 3844	Engineering 4322	Engineering 5713	3 credit hours from Engineering 6101, Philosophy 2801, Sociology 2120, or Women's Studies 4107	Engineering 7601	6 credit hours from: Engineering 7602, 7603, 7680, 8680, 8670, 8671, 8672, 8673, 8674, 8675, 8690, 8691, 8692, 8693, or 8694
Engineering 3731	Engineering 4717	Engineering 5706	Engineering 6601	3 credit hours from: Engineering 7602, 7603, 7680, 8680, 8670, 8671, 8672, 8673, 8674, 8675, 8690, 8691, 8692, 8693, or 8694	
	Engineering 4723	Engineering 5434	Engineering 6713		

Notes: 1. Some of the technical electives listed above may not be offered every year. A list of the current offerings is available from the Discipline Chair and the Associate Dean (Undergraduate).  
2. From time to time, a technical elective may be offered in a term other than indicated on the above chart.  
3. The common courses in the Offshore Oil and Gas Engineering Option are Engineering 6601, 7601, and 8600.  
4. The Offshore Oil and Gas Option electives are selected each year from courses listed in the Calendar. A list of the course offerings is available from the Associate Dean (Undergraduate Studies).

## Computer Engineering Curriculum

Electrical and Computer Core		Computer Engineering			
Fall	Spring	Winter	Fall	Spring	Winter
Term 3	Term 4	Term 5	Term 6	Term 7	Term 8
Engineering 3423	Engineering 4102	Complementary Studies Elective	3 credit hours from Engineering 6101, Philosophy 2801, Sociology 2120, or Women's Studies 4107	Engineering 7800	Engineering 8800
Engineering 3821	Engineering 4823	Engineering 5821	Engineering 6871	Engineering 7824	Engineering 8879
Engineering 3422	Engineering 4423	Engineering 5891	Engineering 6806	Engineering 7863	9 credit hours from: Engineering 8821, 8893, 8863, 8826, 8874, 8801-9905, or Computer Science Elective
Engineering 3891	Engineering 4892	Engineering 5895	Engineering 6876	Engineering 7893	
Engineering 3861	Engineering 4862	Engineering 5865	Engineering 6861	6 credit hours from: Engineering 7855, 7814, 7858, or 7944	
Complementary Studies Elective (Fast-track students only)	Engineering 4854	Engineering 5854	3 credit hours from: Engineering 6891, 6825, or Computer Science Elective		

- Notes: 1. Some of the technical electives listed above may not be offered every year. A list of the current offerings is available from the Discipline Chair and the Associate Dean (Undergraduate).
2. From time to time, a technical elective may be offered in a term other than indicated on the above chart.
3. Computer Science electives require the permission of both the Department of Computer Science and the Faculty of Engineering and Applied Science.

## Computer Engineering Curriculum - Offshore Oil and Gas Option (OOG)

Electrical and Computer Core		Computer Engineering			
Fall	Spring	Winter	Fall	Spring	Winter
Term 3	Term 4	Term 5	Term 6	Term 7	Term 8
Engineering 3423	Engineering 4102	Complementary Studies Elective	3 credit hours from Engineering 6101, Philosophy 2801, Sociology 2120, or Women's Studies 4107	Engineering 7824	Engineering 8600
Engineering 3821	Engineering 4823	Engineering 5821	Engineering 6871	Engineering 7863	Engineering 8879
Engineering 3422	Engineering 4423	Engineering 5891	Engineering 6806	Engineering 7893	Engineering 8680
Engineering 3891	Engineering 4892	Engineering 5895	Engineering 6876	Engineering 7680	3 credit hours from: Engineering 7602, 7603, 8670, 8671, 8672, 8673, 8674, 8675, 8690, 8691, 8692, 8693, or 8694
Engineering 3861	Engineering 4862	Engineering 5865	Engineering 6861	Engineering 7601	3 credit hours from: Engineering 8821, Engineering 8893, Engineering 8863, Engineering 8826, Engineering 8874, Engineering 8801-8805, or Computer Science Elective
Complementary Studies Elective (Fast-track students only)	Engineering 4854	Engineering 5854	Engineering 6601		

- Notes: 1. Some of the technical electives listed above may not be offered every year. A list of the current offerings is available from the Discipline Chair and the Associate Dean (Undergraduate).
2. From time to time, a technical elective may be offered in a term other than indicated on the above chart.



- The common courses in the Offshore Oil and Gas Engineering Option are Engineering 6601, 7601, and 8600.
- The Offshore Oil and Gas Option electives are selected each year from courses listed in the Calendar. A list of the course offerings is available from the Associate Dean (Undergraduate Studies).
- Computer Science electives require the permission of both the Department of Computer Science and the Faculty of Engineering and Applied Science.

#### Electrical Engineering Curriculum

Electrical and Computer Core		Electrical Engineering			
Fall	Spring	Winter	Fall	Spring	Winter
Term 3	Term 4	Term 5	Term 6	Term 7	Term 8
Engineering 3423	Engineering 4102	Complementary Studies Elective	3 credit hours from Engineering 6101, Philosophy 2801, Sociology 2120, or Women's Studies 4107	Engineering 7800	Engineering 8800
Engineering 3821	Engineering 4823	Engineering 5821	Engineering 6871	Engineering 7824	Engineering 8826
Engineering 3422	Engineering 4423	Engineering 5432	Engineering 6806	Engineering 7858	9 credit hours from: Engineering 8821, 8845, 8879, 5865, 8874, 8882 or 8806-8809
Engineering 3891	Engineering 4892	Engineering 5842	Engineering 6843	Engineering 7844	
Engineering 3861	Engineering 4862	Engineering 5812	Engineering 6813	6 credit hours from Engineering 7855, 7846, 7811, 7944, or 4322	
Complementary Studies Elective (Fast-track students only)	Engineering 4854	Engineering 5854	3 credit hours from Engineering 6876 or 6825		

- Notes: 1. Some of the technical electives listed above may not be offered every year. A list of the current offerings is available from the Discipline Chair and the Associate Dean (Undergraduate).
2. From time to time, a technical elective may be offered in a term other than indicated on the above chart.

#### Electrical Engineering Curriculum - Offshore Oil and Gas Option (OOG)

Electrical and Computer Core		Electrical Engineering			
Fall	Spring	Winter	Fall	Spring	Winter
Term 3	Term 4	Term 5	Term 6	Term 7	Term 8
Engineering 3423	Engineering 4102	Complementary Studies Elective	3 credit hours from Engineering 6101, Philosophy 2801, Sociology 2120, or Women's Studies 4107	Engineering 7824	Engineering 8600
Engineering 3821	Engineering 4823	Engineering 5821	Engineering 6871	Engineering 7858	Engineering 8826
Engineering 3422	Engineering 4423	Engineering 5432	Engineering 6806	Engineering 7844	Engineering 8680
Engineering 3891	Engineering 4892	Engineering 5842	Engineering 6843	Engineering 7680	3 credit hours from: Engineering 7602, 7603, 8670, 8671, 8672, 8673, 8674, 8675, 8690, 8691, 8692, 8693, or 8694
Engineering 3861	Engineering 4862	Engineering 5812	Engineering 6813	Engineering 7601	3 credit hours from: Engineering 8821, 8845, 8879, 5865, 8874, 8882, or 8806-8809
Complementary Studies Elective (Fast-track students only)	Engineering 4854	Engineering 5854	Engineering 6601		

- Notes: 1. Some of the technical electives listed above may not be offered every year. A list of the current offerings is available from the Discipline Chair and the Associate Dean (Undergraduate).
2. From time to time, a technical elective may be offered in a term other than indicated on the above chart.
3. The common courses in the Offshore Oil and Gas Engineering Option are Engineering 6601, 7601, and 8600.
4. The Offshore Oil and Gas Option electives are selected each year from courses listed in the Calendar. A list of the course offerings is available

from the Associate Dean (Undergraduate Studies).

### Mechanical Engineering Curriculum

Fall	Spring	Winter	Fall	Spring	Winter
Term 3	Term 4	Term 5	Term 6	Term 7	Term 8
Engineering 3205	Engineering 4102	Complementary Studies Elective	Engineering 3423	Engineering 7936	Engineering 8936
Engineering 3844	Engineering 4312	Engineering 5312	3 credit hours from Engineering 6101, Philosophy 2801, Sociology 2120, or Women's Studies 4107	Engineering 7901	Engineering 8903
Engineering 3901	Engineering 4422	Engineering 5435	Engineering 6901	Engineering 7903	9 credit hours from: Engineering 8904, 8935, 8943, 8944, or 8962
Engineering 3933	Engineering 4901	Engineering 5926	Engineering 6925	Engineering 7962	
Engineering 3941	Engineering 4913	Engineering 5913	Engineering 6926	3 credit hours from: Engineering 7934, 7943, 7944, or 7945	
Complementary Studies Elective (Fast Track Only)	Engineering 4933	Engineering 5932	Engineering 6972		

- Notes: 1. Some of the technical electives listed above may not be offered every year. A list of the current offerings is available from the Discipline Chair and the Associate Dean (Undergraduate).  
 2. From time to time, a technical elective may be offered in a term other than indicated on the above chart.  
 3. Students are permitted to replace a maximum of two technical electives listed above with two OOG technical electives listed under Electives, Mechanical Engineering- Offshore Oil and Gas Engineering Option Chart.

### Mechanical Engineering - Offshore Oil and Gas Option (OOG)

Fall	Spring	Winter	Fall	Spring	Winter
Term 3	Term 4	Term 5	Term 6	Term 7	Term 8
Engineering 3933	Engineering 4933	Complementary Studies Elective	Engineering 3423	Engineering 7936	Engineering 8600
Engineering 3205	Engineering 4102	Engineering 5913	Engineering 6925	Engineering 7901	Engineering 8903
Engineering 3941	Engineering 4312	Engineering 5312	Engineering 6901	Engineering 7903	9 credit hours from: Engineering 7602, 7603, 7680, 8680, 8670, 8671, 8672, 8673, 8674, 8675, 8690, 8691, 8692, 8693, or 8694
Engineering 3844	Engineering 4422	Engineering 5435	3 credit hours from Engineering 6101, Philosophy 2801, Sociology 2120, or Women's Studies 4107	Engineering 7601	
Engineering 3901	Engineering 4901	Engineering 5926	Engineering 6926	3 credit hours from: Engineering 7602, 7603, 7680, 8680, 8670, 8671, 8672, 8673, 8674, 8675, 8690, 8691, 8692, 8693, or 8694	
	Engineering 4913	Engineering 5932	Engineering 6601		

- Notes: 1. Some of the technical electives listed above may not be offered every year. A list of the current offerings is available from the Discipline Chair and the Associate Dean (Undergraduate).  
 2. From time to time, a technical elective may be offered in a term other than indicated on the above chart.  
 3. The common courses in the Offshore Oil and Gas Engineering Option are Engineering 6601, 7601, and 8600.  
 4. The Offshore Oil and Gas Option electives are selected each year from courses listed in the Calendar. A list of the course offerings is available from the Associate Dean (Undergraduate Studies).

## Ocean and Naval Architectural Engineering

Term 3	Term 4	Term 5	Term 6	Term 7	Term 8
Engineering 3054	Engineering 4061	Complementary Studies Elective	Engineering 6002	Engineering 7002	Engineering 8000
Engineering 3205	Engineering 4102	Engineering 5011	Engineering 6045	Engineering 7005	Engineering 8054
Engineering 3423	Engineering 4312	Engineering 5312	Engineering 6030	Engineering 7033	Physics 4300
Engineering 3844	Engineering 4422	Engineering 5435	Engineering 6020	Engineering 7052	Engineering 8058
Engineering 3901	Engineering 4901	Engineering 5926	3 credit hours from Engineering 6101, Philosophy 2801, Sociology 2120, or Women's Studies 4107	Engineering 7601	3 credit hours from: Engineering 8030, 8003, 8046, 8090, 8091, or 8092
Complementary Studies Elective (Fast Track Students Only)	Engineering 4913	Engineering 5932	Engineering 6925		

Notes: 1. Some of the technical electives listed above may not be offered every year. A list of the current offerings is available from the Discipline Chair and the Associate Dean (Undergraduate).  
2. From time to time, a technical elective may be offered in a term other than indicated on the above chart.

## Ocean and Naval Architectural Engineering - Offshore Oil and Gas Option (OUGE)

Term 3	Term 4	Term 5	Term 6	Term 7	Term 8
Engineering 3054	Engineering 4061	Complementary Studies Elective	Engineering 6002	Engineering 7002	Engineering 8600
Engineering 3205	Engineering 4102	Engineering 5011	Engineering 6925	Engineering 7005	Physics 4300
Engineering 3423	Engineering 4312	Engineering 5312	Engineering 6030	Engineering 7033	Engineering 8058
Engineering 3844	Engineering 4422	Engineering 5435	3 credit hours from Engineering 6101, Philosophy 2801, Sociology 2120, or Women's Studies 4107	Engineering 7052	6 credit hours from: Engineering 7602, 7603, 7680, 8680, 8670, 8671, 8672, 8673, 8674, 8675, 8690, 8691, 8692, 8693, or 8694
Engineering 3901	Engineering 4901	Engineering 5926	Engineering 6045	Engineering 7601	
	Engineering 4913	Engineering 5932	Engineering 6601		

Notes: 1. Some of the technical electives listed above may not be offered every year. A list of the current offerings is available from the Discipline Chair and the Associate Dean (Undergraduate).  
2. From time to time, a technical elective may be offered in a term other than indicated on the above chart.  
3. The common courses in the Offshore Oil and Gas Engineering Option are Engineering 6601, 7601, and 8600.  
4. The Offshore Oil and Gas Option electives are selected each year from courses listed in the Calendar. A list of the course offerings is available from the Associate Dean (Undergraduate Studies).

## 6 Course List (For Students Admitted to the Program No Later than Fall 2006)

In accordance with Senate's *Policy Regarding Inactive Courses*, course descriptions for courses which have not been offered in the previous three academic years and which are not scheduled to be offered in the current academic year have been removed from the following listing. For information about any of these inactive courses, please contact the Dean of the Faculty.

With the exception of Engineering 1000, courses offered by the Faculty of Engineering and Applied Science are identified by a four-digit numbering system, each digit signifying the following:

First - Academic term during which the course is normally offered

Second - The primary areas of study, namely:

- 1 - Complementary Studies
- 2 - Structure and Behaviour of Materials
- 3 - Physical Concepts
- 4 - Mathematics
- 5 - Engineering Design
- 6 - Resource-Related
- 7 - Civil Engineering
- 8 - Electrical and Computer Engineering
- 9 - Mechanical Engineering
- 0 - Ocean and Naval Architectural Engineering

Third - Course grouping within areas or programs

Fourth - Course sequence or revision.

### 6.1 Term 1 Courses

Note: All students take a Complementary Studies elective in Term 1. For a list of electives see **Complementary Studies Courses**.

**1000 An Introduction to Engineering.** - inactive course.

**1313 Mechanics I Statics with an Introduction to Dynamics** is an Introduction to vector algebra. Coplanar and non-coplanar force systems, equivalent force systems, moments and equilibrium, emphasizing the use of free body diagrams. Analysis of trusses, frames and machines. Dry friction. Centers of gravity and centroids. Moments of inertia of areas. Geometric aspects of particle motion (kinematics).

**1333 Basic Electrical Concepts and Circuits** examines electrical charge, the electric field, energy and voltage, electric current; the magnetic field and its relation to current; sources of electromotive force. Basics of signals and waveforms, periodicity, average and root-mean-square values. Conduction, charge storage, and magnetic flux changes as a basis for component models as resistance, capacitance, and inductance; power and energy relationships. Kirchhoff's laws; formulation and solution for simple circuits; equivalent circuits; Thevenin and Norton representations. The sinusoidal steady state for R-L-C circuits; energy transfer and power, energy storage and reactive power; phasor methods. Relevant laboratory exercises.  
Note: Credit cannot be obtained for both Engineering 1333 and 2333.

**1405 Engineering Mathematics I** examines linear systems and matrices, vector spaces, sequences & series, complex numbers, parametric and polar curves.

**1504 Engineering Graphics** Graphics Fundamentals: This part of the course covers the fundamentals of effective graphic communication skills, including drawing with instruments, freehand sketching, orthographic projections of solid objects, auxiliary views, sections, three dimensional pictorials, dimensioning and tolerances, working drawings, and assembly drawings. Computer Graphics: This part of the course introduces the use of a computer aided design package for the construction of two-dimensional drawings and three-dimensional models of engineering objects. These models are used for creating all the necessary projections for the production of engineering drawings. The engineering graphics principles and visualization skills developed in the graphics portion of the course are employed and reinforced.

## 6.2 Term 2 Courses

**001W Engineering Work Term 1 (Spring Semester)** represents their first experience in an engineering or related work environment and as such represents the first opportunity to evaluate their choice of pursuing an engineering education. Students are expected to learn, develop and practice the basic standards of behaviour, discipline and performance normally found in their work environment.

The communications component for Work Term 1 consists of two documents which must be submitted for evaluation; additional communications requirements (e.g. technical report, manual) may be requested by the employer. The two documents to be submitted to the Engineering Co-operative Education Office are:

1. Personal Job Diary
  2. Work Term Journal or Short Technical Report or Portfolio.
- Detailed guidelines for the preparation of these documents are provided in the Engineering Student Co-op Handbook. These documents should be submitted or postmarked no later than the last official day of the work term as shown in the University Calendar.

**011W Engineering Practice Program** - inactive course.

**200W Professional Development Seminars** introduces the student to co-operative education. Topics include objectives for the work term component of the engineering program, preparation for the job competition, interview skills, the work environment, basic professional ethics, communication in the work place, occupational health and safety, learning goals in the work place, work reports.

**2205 Chemistry and Physics of Engineering Materials I** is an introduction to the structure and properties of engineering materials, in particular metals, semiconductors, ceramics, glasses and polymers. Topics include a review of atomic bonding, discussion of basic crystalline and amorphous structures, point and line defects, and the role these structural features play in elastic and plastic deformation, yield, fracture, glass transition, thermal conductivity, thermal expansion, specific heat and electrical conductivity. Relevant laboratory exercises.

**2313 Mechanics II. Kinematics and Kinetics of Rigid Bodies** covers kinematics, review of particle kinematics, rigid body kinematics in a plane, introduction to rigid body kinematics in 3-D. Kinetics (particle and rigid body theory), force-acceleration, work-energy, impulse momentum. Engineering applications of rigid body kinematics and kinetics.

**2420 Structured Programming** introduces simple programs and the programming environment. An introduction to computer architecture - hardware, instructions and data. The major control structures as building blocks for computer programs. Variables, constants and data types, representations, ranges and declarations. Simple input/output processes and data formatting. Strings. Functions, subroutines and the basic issues of modularity. Programming style. Sequential files.

**2422 Engineering Mathematics II** includes partial differentiation, ordinary differential equations, Laplace transforms, and engineering applications.

**2503 Engineering Design** introduces students to the design process through project based activities. Students will develop a systematic approach to open-ended problem solving. Topics incorporated into the design activities include the development of problem statements and design criteria, solution generation, solution evaluation, feasibility analysis, team work, project management and effective communications. The lab portion of the course provides exposure to practical design issues, familiarity with common shop practice and tools, and an opportunity to fabricate some of the proposed design solutions.

## 6.3 Term 3 Courses

**002W Engineering Work Term 2 (Winter Semester)** is expected to further develop and expand the student's knowledge and work-related skills thus enabling them to accept increased responsibility and challenge. Students should also demonstrate an ability to deal with increasingly complex work-related concepts and problems.

The communications component for Work Term 2 consists of two documents: an Industry Company Profile (ICP) which must be submitted for evaluation and a Job Diary which will not be submitted but must be available for review during monitoring. Additional documents (e.g. technical report, manual) may be requested by the employer. The ICP consists of a general industry profile, a company profile, an outline of the student's role within the company and supporting documents. The words Industry and Company are used here in a broad sense and include governments, regulatory agencies etc. Detailed guidelines for the preparation of the ICP are provided in the

Co-op Student Handbook. The ICP should be submitted or postmarked no later than the last official day of the work term as shown in the University Calendar.

**3054 Ocean Engineering Hydrostatics** is an introductory course to naval architecture and marine engineering. It discusses the basic principles of the statics of rigid floating or submerged structures. These include: ships, offshore platforms and submersibles. Methods of analysis of the hydrostatics, stability and trim, damage stability and the statics of mooring systems are introduced. Applications are also discussed.

**3205 Chemistry and Physics of Engineering Materials II** examines aspects of chemical and physical processes and microscopic structure relevant to the production and use of engineering materials, focusing on metals, alloys, silicates, portland cement, plastics and adhesives, composites, and wood. Topics include solid-state solutions and compounds, alloy structures, phase diagrams, reaction rates, solid-state transformations, polymerization, oxidation and corrosion, hardness, creep, fatigue, fracture toughness, and visco-elastic deformation. Relevant laboratory exercises.

**3422 Discrete Mathematics for Engineering** is an introduction to discrete mathematics including a selection of topics such as propositional logic, introductory predicate logic, mathematical reasoning, induction, sets, relations, functions, integers, graphs, trees, and models of computation.

**3423 Probability and Statistics** covers probability; probability distributions; probability densities; sampling distribution; hypothesis testing; regression and correlation.

**3610 Earth Sciences for Civil Engineering** is an introduction to basic concepts in Geology and Mining with emphasis on applications in Civil, Geological, Mining and Environmental Engineering through the use of case histories. Includes the study of rocks and minerals in selected field and laboratory exercises.

**3703 Surveying and Geomatics** covers plane surveying: distance, elevation, and angle measurements; horizontal and vertical curves; plane survey calculations; area and volume computations. Photogrammetry: sensors and platforms, mathematics of photogrammetry; instruments and equipment, photogrammetric products, digital photogrammetry, remote sensing, and introduction to global positioning and geographical information systems (GIS). A surveying field school to introduce students to the use of surveying equipment and mapping will be held in the first two weeks of the term. Relevant laboratory exercises.

**3731 Materials of Construction** examines physical properties of common construction materials, primarily metals, woods, concrete and asphalt; examination of properties with respect to design and use of end product; design procedures for concrete and asphalt; introduction to the use of reference handbooks and manufacturers specifications. Introduction to reinforced concrete. Relevant laboratory exercises.

**3821 Circuit Analysis** covers elementary circuits, wye-delta transformation, bridge circuits; transient analysis of first- and second-order circuits; sinusoidal steady state analysis, phasor diagrams, maximum power transfer, frequency selective circuits (filters); Laplace transforms in circuit analysis (transients, steady state, transfer function). Relevant laboratory exercises.

**3844 Basic Electrical Components and Systems** for (Non-Electrical and Computer Engineering Students) is an Introduction to electrical and computer engineering; review of circuit concepts and analysis; operational amplifiers; filters; analog electronics and instrumentation; transducers; basics of rotating machinery and transformers; models, characteristics and applications of dc motors, induction motors, synchronous motors and transformers; introduction to motor control; plant power system; electrical safety.

**3861 Digital Logic** examines number systems and arithmetic, Boolean algebra; combinational logic circuits: gates, memory devices, programmable logic devices; synchronous sequential logic circuits: flip-flops, counters, registers; asynchronous sequential logic circuits: races and hazards, introduction to algorithmic state machines; design with digital integrated circuits. Relevant laboratory exercises.

**3891 Advanced Programming** examines advanced procedural language programming; data structures, user defined types, unions and pointers; modularization techniques, scope and data hiding; object-oriented programming; classes, objects and attributes; data encapsulation, member and non-member functions; overloading, methods and friend functions; inheritance, sub- and super-classes.

**3901 Thermodynamics I** is a macroscopic approach to heat, work, and energy; properties of pure substances; conservation of mass; conservation of energy for open and closed systems; thermal efficiency and coefficients of performance; the second law of thermodynamics and its corollaries; entropy; second law analysis of thermodynamic systems; second law efficiency. Relevant laboratory exercises.

**3933 Mechanisms and Machines** is an overview of mechanisms within machines; graphical and matrix methods for analysis of moving mechanisms; kinematics and kinetics of planar mechanisms; dynamic formulations: Newton-Euler and Lagrangian; loads on mechanisms; synthesis of mechanisms. Synthesis project. Relevant laboratory exercises.

**3941 Production Technology** is an overview of production; production strategies; dimensioning and tolerancing; basic material removal processes;

forming and shaping processes; casting, molding, extrusion and joining processes; computer aided machining; new technologies. Relevant laboratory exercises.

## 6.4 Term 4 Courses

Note: *Engineering 4102 is a required Complementary Studies course.*

**003W Engineering Work Term 3 (Fall Semester)** is a work term during which students should have the sufficient academic grounding and work experience to contribute in a positive manner to the engineering design and problem solving processes practiced in the work environment. Students can become better acquainted with their chosen discipline, can observe and appreciate the attitudes, responsibilities, and ethics normally expected of engineers. Students are expected to show greater independence and responsibility in their assigned work functions.

The communications component for Work Term 3 consists of preparing a formal, descriptive technical report which must be submitted for evaluation. Students are also expected to keep a job diary. Additional communication requirements may be requested by the employer. The technical descriptive report should describe a technical process, project, procedure or investigation chosen from the student's work environment. Guidelines for the preparation of a descriptive technical report are provided in the Co-op Student Handbook. The report should be submitted or postmarked no later than the last official day of the work term as shown in the University Calendar.

**4061 Marine Production Management** is an introduction to engineering and related management information systems; demand forecasting; planning and scheduling; plant layout including assembly line balancing, process and group technology layout, fixed position layout, plus flexible manufacturing, just in time, and computer integrated manufacturing concepts; productivity measurement and management; introduction to quality management; tendering and bidding on contracts; human resource management.

**4102 Engineering Economics** is an introduction to concepts in the determination of the economic feasibility of engineering undertakings, especially the time value of money--interest rates, depreciation, replacement, economic life, present value, rate of return, payback period. Other topics will include financing, supply and demand, private and social cost estimations, secondary and intangible benefits and costs, benefit-cost models, economic risk analysis, economic optimization.

**4312 Mechanics of Solids I** examines axial force, shear and bending moment. Stress-strain relations. Torsion. Bending and shearing stress in beams. Thin cylinders. Compound stresses. Transformation of stress. Relevant laboratory exercises.

**4322 Thermal Sciences** examines the fundamental concepts associated with thermodynamics, fluid dynamics and heat transfer; first and second laws of thermodynamics; system and control volume analysis; classification of flows; introduction to boundary layers and drag; convection, conduction and radiation heat transfer; thermal insulation and calculation of R-values; cooling of electrical components.

**4422 Introduction to Numerical Methods** examines errors; numerical stability; solution of linear and nonlinear equations and systems; introduction to eigenvalues and eigenvectors; function and data approximations; numerical differentiation and integration of functions; numerical solution of ordinary differential equations. Relevant computer laboratory exercises.

**4423 Numerical Methods for Electrical Engineers** is an introduction to numerical methods including analysis of errors; interpolation; solution of linear systems of equations; eigenvalues and eigenvectors; solution of nonlinear equations; optimization methods; numerical differentiation and integration; solution of ordinary differential equations; random number generators; introduction to simulation methods. Relevant computer laboratory exercises.

**4717 Applied Environmental Science and Engineering** examines the nature and scope of environmental problems; concept of sustainable development; natural environmental hazards; introduction to ecology, microbiology and epidemiology; basic concepts of environmental quality parameters and standards; solid and hazardous wastes; atmospheric, noise, and water pollution, their measurements, and control. Relevant laboratory exercises.

**4723 Geotechnical Engineering I** is an introduction to soil as a three-phase material; physical and mechanical properties; structure; classification of soils; hydraulic properties; permeability; effective stress concept in soils; shear strength, types of tests and applications; one-dimensional consolidation theory. Relevant laboratory exercises.

**4823 Introduction to Systems & Signals** is an introduction to systems and signals; mechanical and electrical analogues; principles of linear superposition and time invariance; definition, properties, and use of the delta function; applications of complex functions and variables; impulse and step responses; input-output relations of continuous-time systems in terms of convolution and transfer functions; frequency response plots; the Fourier transform and applications; applications of Laplace transform to filtering, communications, and controls. Relevant laboratory exercises.

**4854 Electronic Devices and Circuits** examines the principles of operation of the diode, bipolar junction transistor and metal-oxide semiconductor, field-

effect transistor; terminal characteristics, graphical analysis; biasing of devices; device and circuit models of dc, small-signal and high-frequency analysis; single-stage amplifiers; differential and multi-stage amplifiers; digital electronics; applications of electronic devices; design of regulated dc power supplies and mid-frequency signal amplifiers using discrete components; computer-aided analysis and design of electronic circuits. Relevant laboratory exercises.

**4862 Microprocessors** is a course on microprocessor architecture. Assembly language programming: addressing modes, table look up. Memory mapped devices. Interfacing techniques: parallel, serial. Timing control. Analog input and output. Computer displays. Relevant laboratory exercises.

**4892 Data Structures** examines fundamental data structures; recursive structures and programming techniques; modularity and reusability; time complexity and efficient data structures; procedure abstraction; data abstraction and precise documentation of data structures.

**4901 Thermodynamics II** examines thermodynamic cycles: power and refrigeration applications; human comfort and air conditioning: mixture of gases and vapours, humidity, psychometrics; chemically reacting mixtures; combustion. Relevant laboratory exercises.

**4913 Fluid Mechanics I** examines fluid statics; fluid flow phenomena; control volume analysis of fluid motion; conservation of mass, momentum and energy; Bernoulli equation; head losses. Applications of conservation laws: flow measurement devices; pipe networks; momentum devices; dimensional analysis. Boundary layer phenomena. Lift and drag. Relevant laboratory exercises.

Note: *Credit may not be obtained for both Engineering 5713 and Engineering 4913.*

**4933 Electro-mechanical Systems** is a review of motors and sensors; hydraulics and pneumatics; basics of automatic control: control system simulation; digital electronics; computer based controllers; programmable miniature controllers; direct digital controllers; programmable logic controllers. Case studies. Synthesis project. Relevant laboratory exercises.

## 6.5 Term 5 Courses

Note: *All students take an approved Complementary Studies elective in Term 5. The elective is chosen from a list provided by the Office of the Associate Dean (Undergraduate Studies).*

**004W Engineering Work Term 4 (Spring Semester)** is a work term during which students should anticipate greater participation in their selected engineering discipline and become more experienced and proficient with the appropriate design procedures. Students are expected to acquire improved speed and accuracy in their work and at the same time, be willing to accept greater responsibility and to function with less direct supervision. The use and importance of recently acquired analytical skills in engineering analysis should become more apparent and be applied when appropriate. The purpose and application of specifications and codes should be demonstrated when necessary.

The communication component for Work Term 4 consists of an oral presentation on a technical subject taken from the student's work environment; additional communication requirements may be requested by the employer. Preferably the topic should be specifically related to the student's work. The presentation should be of 10 minutes duration and will be given on campus in a formal setting after students have returned to class. A written summary is also required. Guidelines for the preparation of this oral presentation are provided in the Co-op Student Handbook.

**5011 Resistance and Propulsion of Ships I** will examine the phenomena resisting the motion of ships and some factors considered in the design of the marine screw propeller. The topics include the resistance due to friction, wave making, form appendage, wind and waves, squat, blockage, and shallow water effects, and also include the estimation of powering using methodical series and statistical methods as well as a treatment of the resistance of some specialist vessels, e.g. semisubmersibles and hydrofoils. Topics considered in the design of the marine screw propeller include propeller theory, blade sections, blade strength, methodical series charts, efficiency elements, lifting line calculations, cavitation, and propellers in non-uniform flow. Relevant laboratory exercises are provided.

**5101 The Engineering Profession** examines the origins and development of Engineering as a profession and an examination of its values. The place of technology in society and the nature of technological decisions.

**5312 Mechanics of Solids II** examines the failure theories for ductile and brittle materials; statically determinate and indeterminate beams; elastic bending of beams; impact loads; stability of columns with centric and eccentric loads; plastic bending of beams; plastic hinges. Relevant laboratory exercises.

**5432 Advanced Calculus (Electrical and Computer)** examines Vector Calculus, partial differential equations, Fourier series, boundary value problems.

**5434 Applied Mathematical Analysis (Civil)** examines numerical and analytical solution of systems or ordinary differential equations using predictor-corrector and Runge-Kutta methods; boundary value problems, eigenvalue problems, numerical solution of partial differential equations using the methods of finite differences, (SOLR) successive over-relaxation

and characteristics, simplex method for linear programming; numerical Fourier Analysis.

**5435 Advanced Calculus** is an overview of vector calculus; Gauss's theorem; Stokes' theorem; Green's theorem. Partial differential equations for mechanical systems: classification and solution. Calculus of variations: functionals for mechanical systems; Lagrangian formulation of dynamics.

**5706 Design of Concrete Structures** is a review of concrete mix design; design methods and requirements, strength of rectangular sections in bending, balanced condition at ultimate strength with tension reinforcement, bending with both tension and compression reinforcement; serviceability, deflections, flexural crack control for beams and one-way slabs; shear strength, inclined cracking, and shear reinforcement; bond stress and development of reinforcement; T-sections in bending; members in compression and bending; length effects, lateral ties, spiral reinforcement and longitudinal bar placement. Relevant laboratory exercises.

**5708 Design of Civil Engineering Systems** is an introduction to civil engineering systems, optimization in design, risk and decision analysis, and measurements; risk management, uncertainty associated with competition, optimizing using mathematical programming; introduction to dynamic programming and network analysis; applications of systems techniques to various subdisciplines of civil engineering.

**5713 Fluid Mechanics** examines the properties of fluids; fluid statics; buoyancy and stability; kinematics, continuity, energy and momentum principles; energy and hydraulic gradelines; laminar and turbulent flow; introduction to boundary layers, drag, jets and wakes; fluid measurement; principles of similitude and modelling. Relevant laboratory exercises.

Note: *Credit may not be obtained for both Engineering 5713 and Engineering 4913.*

**5812 Basic Electromagnetics** examines Coulomb's law and electric field intensity; electric flux density and Gauss' law; electrostatic potential and energy; conductors, dielectrics, and capacitance; Laplace's and Poisson's equations; the steady magnetic field; magnetic forces and magnetic materials; steady magnetic field and static electric field.

**5821 Control Systems I** is an introduction to control systems, negative feedback, on/off and PID controllers; mathematical modeling of electromechanical systems; transfer functions and state space models, block diagram reduction, introduction to signal flow graphs; controller realization using op-amps; steady state and transient response analysis; Routh's stability criterion; basic control actions and response of control systems; root locus analysis and design; analysis and design of compensators in time domain; frequency response analysis; bode diagram; gain and phase margins; compensator design in frequency domain; Nyquist stability criterion; introduction to PID controller tuning methods; analysis and design of control systems using Matlab. Relevant laboratory exercises.

**5842 Electromechanical Devices** is an introduction to fundamental principles of energy conversion; review of three-phase systems; magnetic fields and circuits; transformer models, performance and applications; basic concepts of rotating machines; translational and rotational transducers; characteristics, performance and control of dc machines; principles of ac generators and motors. Relevant laboratory exercises.

**5854 Analog Electronics** examines the fundamental feedback equations and their applications; feedback topologies in electronics; operational amplifiers: ideal models and circuits, and detailed analysis of specifications; bias currents, offset voltages, CMRR, noise, slew rate and bandwidth; interface circuits, comparators, sample-and-hold, A/D and D/A converters; phase-locked loops; computer-aided design and analysis of electronic circuits. Relevant laboratory exercises.

**5865 Digital Systems** covers basic topics in logic design; advanced minimization techniques; design of combinational and sequential circuits with programmable logic devices (PLDs); topics in state machine design; asynchronous sequential circuits; introduction to microprogramming; central processing unit design; memory management; parallel processing; advanced computer architectures; design automation; design for testability; digital system reliability; transmission line effects.

**5891 Design and Analysis of Algorithms** examines basic combinatorial analysis; recursive algorithms; complexity analysis; sorting and searching; problem solving strategies; complexity classes; computability and undecidability.

**5895 Software Design** examines the development process: requirement analysis, design, iterative development, design documentation; an introduction to the Unified Modeling Language: use cases, class diagrams and sequence diagrams; an introduction to software design patterns: creational patterns, structural patterns and behavioural patterns; object-oriented, modular decomposition. The course includes a major design project.

**5913 Fluid Mechanics II** examines differential analysis of fluid motion; conservation of mass; continuity equation; conservation of momentum; Navier-Stokes equations; conservation of energy; inviscid incompressible flows; low Reynolds number flows; boundary layer flows; compressible flows. Relevant laboratory exercises.

**5926 Mechanical Component Design I** is a review of loads and stresses; design of springs, power screws, threaded fasteners, clutches, brakes, belt drives, spur gears, and gear trains. Synthesis project. Relevant laboratory

exercises.

**5932 Mechanical Vibrations** examines free and forced vibrations of single and multi-degree of freedom systems; response to periodic and non-periodic excitations; vibration isolation and control; vibration measurement. Relevant laboratory exercises.

## 6.6 Term 6 Courses

**005W Engineering Work Term 5 (Winter Semester)** is a work term during which students may expect to be involved in design projects to the extent of preparing formal proposals and reports, including specifications and plans. Self confidence and initiative should be sufficiently developed at this stage to enable a student to work at such functions with limited supervision. The communications component for Work Term 5 is a formal technical report. The subject should be taken from the student's work or work environment and should deal with a project or problem worked on during the term. The report should be documented according to engineering standards. Guidelines for a formal technical report are provided in the Co-op Student Handbook. The report should be submitted or postmarked no later than the last official day of the work term as shown in the University Calendar.

**6002 Ship Hull Strength** examines longitudinal strength, still water and wave bending moment, shear and bending moment curves, Smith Correction, section modulus calculation, torsion and racking forces. Bulkhead and girder scantlings, portal frame analysis by moment distribution and energy method. Finite element analysis. Use of Classification Society rules for design of midship section.

**6020 Marine Propulsion** is a second course in marine screw propellers and ship powering which includes design and analysis of marine propellers and unconventional propulsion devices. Significant emphasis is placed on systems such as waterjets; podded and azimuthing propulsors; contra-rotating propellers; high efficiency devices such as van wheels, wake equalizing ducts, swirl vanes; ducted propellers; novel devices such as oscillating propulsors to wind propulsion; design of ice-class marine propellers; and ship powering evaluation methods for vessels with compound propulsors. Relevant laboratory exercises.

**6030 Dynamics and Maneuvering of Ocean Vehicles** examines applications of the linearised equations of motion to ocean vehicle problems with single and multiple degrees of freedom. Dynamics and maneuvering of marine vehicles: motions in calm water and in waves; hydrodynamics effects such as added mass, radiation and viscous damping; strip theory; irregular motions; and systems for course keeping and motion control. Relevant laboratory exercises.

**6045 Marine Engineering Systems** examines shafting system design; shafting system vibration analysis, study of exciting forces and moments, and balancing of reciprocating and rotating machinery; heat transfer and marine heat exchangers; incompressible fluid flow and piping system design and selection of appropriate pumping devices. Relevant laboratory exercises.

**6101 Assessment of Technology** deals with the issues of the impact of technology on society from an economic, environmental and sociological point of view. Public safety as an engineering responsibility will also be covered. Students will be expected to participate in group discussions, write a number of essays and give oral presentations.

**6601 Introduction to Offshore Petroleum Engineering** is an introduction to the offshore oil and gas engineering industry; the harsh environment; types of platforms and structures; the field surveying process; and exploration phase of offshore oil development. An introduction to petroleum fluids, equipment and processes. Composition and physical properties of liquid and gaseous petroleum fluids. Production drilling and completion methods and equipment. Producing mechanisms. Separation and compression processes and equipment. Instrumentation and control systems. Transportation systems. Refinery processes. Instructional hours per week: 3 lecture hours.

**6705 Structural Analysis I** examines structure classification and loads. Building code provisions. Analysis of statically determinate arches and frames. Shear and moment diagrams for frames. Influence lines for statically determinate structures. Approximate analysis of indeterminate trusses and frames. The force method of analyzing indeterminate beams and frames. Introduction to slope deflection method. Moment distribution method. Relevant laboratory exercises.

**6707 Design of Concrete and Masonry Structures** examines design methods for reinforced concrete two-way slabs. Two-way slabs supported on walls and stiff beams. Design of two-way slab systems, direct design method and equivalent frame method. Design of concrete retaining walls and basement walls, Engineered masonry, allowable masonry stresses, mortar stress, analysis and design of flexural members, axial load and bending in unreinforced and reinforced walls, columns and masonry shear walls. Relevant Laboratory exercises.

**6713 Hydraulics** examines flow in pipe systems and networks; uniform and non-uniform flow in channels; rotodynamic machinery, pumps, turbines and associated conduits; hydraulic models; introduction to bed scour and erosion. Relevant laboratory exercises.

**6723 Geotechnical Engineering II** examines pressure in soils beneath loaded areas; immediate and consolidation settlement; differential

settlement; plastic equilibrium in soils; flownets; stability of slopes; introduction to bearing capacity theories. Relevant laboratory exercises.

**6740 Contract Law and Labour Relations** is an introduction to law as it applies to engineering activity; the nature of law and legal processes, including standard forms; liens, bonds and insurances. The labour movement in North America; examination of union philosophies and managerial attitudes; labour law and collective bargaining; disputes and settlements.

**6806 Project Design Labs in Electrical and Computer Engineering** includes a team project. Students are expected to apply previously acquired knowledge in an integrated fashion to the solution of an electrical and computer/computer engineering problem. An open-ended problem will be chosen to emphasize all phases of the development process including problem definition, design, implementation, and testing, and students will be required to demonstrate that given objectives and specifications have been met. Written and oral project reports will be required.

**6813 Electromagnetic Fields** examines Faraday's law; displacement current and modified Ampere's circuital law; Maxwell equations; Poynting's theorem; plane waves; transmission lines; rectangular and circular waveguides.

**6825 Control Systems II** examines sampled data systems; design of digital control systems using transform techniques; state space models for single- and multi-input/output systems; observability, controllability; state feedback without and with integral controller structure, state observers; quadratic optimal regulator and tracking control strategies; introduction to stability and control of non-linear systems.

**6843 Rotating Machines** examines the fundamentals of rotating machines; design of machine windings; polyphase and single phase induction motor theory and applications; synchronous machine theory; stability and control of synchronous generators; control and protection of rotating machines; introduction to special-purpose machines. Relevant laboratory exercises.

**6861 Computer Architecture** examines memory management; microprogramming; parallel processing system principles; modern computer architectures; sample devices.

**6871 Communication Principles** covers signal representation and analysis; distortionless signal transmission, baseband vs. passband transmission; amplitude modulation including double sideband suppressed carrier (DSB-SC) AM, large carrier AM, quadrature AM (QAM), single sideband (SSB) AM, vestigial sideband (VSB) AM, and the super-heterodyne receiver; frequency/phase modulation (FM/PM) including bandwidth, generation and demodulation, and pre-emphasis and de-emphasis; sampling theorem, pulse amplitude modulation (PAM), pulse code modulation (PCM), delta modulation.

**6876 Voice and Data Communications** is an introduction to communication networks such as the telephone network and the Internet; flow control and error control; circuit switching; packet switching; local area networks; internetworking; communication architectures and protocols.

**6891 Formal Programming Methods** examines the fundamentals of formal program specification, derivation, and verification; data refinement; rudiments of formal language theory including regular expressions, CFGs, and top-down and bottom-up parsing; system specification methods such as statecharts and SCR.

**6901 Heat Transfer I** is an introduction to the three modes of heat transfer. Steady-state, one-dimensional heat conduction: thermal resistance; thermal sources and sinks; fins; contact resistance. Steady-state, multi-dimensional heat conduction: shape factors. Unsteady-state heat conduction: lumped capacity analysis; Heisler charts. Radiation heat transfer: physical mechanism; radiation circuits and shields. Convection heat transfer: empirical correlations. Relevant laboratory exercises.

**6925 Automatic Control Engineering** examines background review; feedback concept; unit impulse response function; transfer functions; block diagrams; controllers; system stability: characteristic equations, Routh Hurwitz criteria, root locus plots, Nyquist plots, Bode plots; performance measures; performance adjustment: compensation; nonlinear phenomena: limit cycles, practical stability. Synthesis project. Relevant laboratory exercises.

**6926 Mechanical Component Design II** examines failure modes and mechanisms; stress concentrations; design of transmission shafts, bolted connections, welded joints, roller and hydrodynamic lubrication bearings. Codes and standards. Relevant laboratory exercises.

**6972 Industrial Materials** examines physical and mechanical properties; industrial materials: metals and metal alloys, ceramics and polymers, composite materials; failure modes and mechanisms; non-destructive testing and evaluation; damage tolerant materials; material treatments; materials selection. Relevant laboratory exercises.

## 6.7 Term 7 Courses

**006W Engineering Work Term 6 (Fall Semester)** is the final Work Term during which students should be expected to be entrusted with the supervision of others and of certain aspects of engineering projects, as required by the employer. In so doing the student should exercise and demonstrate the many professionally related qualities expected of a

graduate engineer about to embark on a professional career.

The communications component for Work Term 6 will take the form of a feasibility study, an operations manual, a project report or other technical report. The student may use a format or structure conforming to the employer's practice. In such cases the student should provide documentary material on the standards for this form of report. The report should be submitted or postmarked no later than the last official day of the work term as shown in the University Calendar.

**7002 Ship Structural Analysis and Design** is a review of longitudinal strength. Principal stress distributions and stress trajectories. Local strength analysis. Panels under lateral load. Columns and stanchions. Panels in buckling under uniform edge compression loading and panels under shear and combination loading. Rational midship section design synthesis based on stress and loading hierarchy. Primary, secondary and tertiary stresses as criteria of strength in ship structural design, including grillage aspects.

**7005 Floating Ocean Structure Design** is the analysis of forces on ocean structures and structural characteristics of circular steel shell hulls. Topics include wave loading theory; wind loading; stability and trim; pressure vessel design theory and codes; combined bending and pressure loads; consideration given to various vessels including floating platforms, articulated columns and buoys.

**7033 Marine Hydrodynamics** examines the fundamental equations of hydrodynamics, boundary layers; potential flow, added mass, damping, circulation, and vorticity; numerical methods for hydrodynamic coefficients; water waves and loading for regular and irregular seas.

**7052 Ocean Systems Design** examines the preliminary design methods for the design of marine platforms and vehicles from mission statement to the selection of one or more acceptable solutions. Weight and cost estimating, power requirements estimating, and selection of principal design characteristics. Economic and operational evaluation of alternative solutions. Relevant design laboratory projects.

**7601 Geosciences Applied in Offshore Engineering** is an introductory course related to the effect of marine sedimentary environments on engineering applications. The course introduces basic concepts in geology and geophysics of the offshore environment. Sediments are studied with special reference to seismic and acoustic methods to remotely determine their mechanical properties. Specific geological hazards (earthquakes, tsunami, turbidity currents, shallow gas, gas hydrates) are assessed in terms of the sediment location and mechanical strength. Examples are drawn from case histories on the Newfoundland Shelf and Slope. Instructional hours per week: 3 lecture hours.

**7602 Subsea Engineering** - inactive course.

**7603 Ocean Ice Engineering** - inactive course.

**7680 Supervisory Control and Data Acquisition** examines data acquisition and intelligent field devices; distributed systems and field bus technology; programmable logic controllers and programming standards; operator control interface; supervisory control and data acquisition; enterprise organization. Relevant laboratory exercises.

**7704 Design of Steel Structures** examines limit states design concepts. Material strength and cross-section properties. Structural steel material standards and products. Design of tension members, axially loaded compression members, and the effective length concept. Design of beams and beam-columns. Design of welded and bolted connections. Example of simple steel building design, illustrating typical roof and wall systems, and interior and exterior columns. Relevant laboratory exercises.

**7706 Structural Analysis II** examines matrix stiffness method for structures: trusses, beams and frames. Degrees of freedom, statics/deformation matrices, element/structural local/global stiffness matrices, load vector, assembly/solution of the matrix equations. Matrix force method. Finite element method for truss, beam and plane stress/strain problems: Nodal/generalized displacements, displacement functions, strain-displacement and stress-strain matrices. Force-displacement matrix, transformation/assembly/solution of matrix equations. Use of a personal computer matrix/finite-element method software for solving truss, frame and plane stress/strain problems. Relevant laboratory exercises.

**7713 Hydrology and Water Resources** examines precipitation, snowmelt, infiltration, runoff and streamflow; statistical treatment of hydrologic data; hydrograph analysis and synthesis; evaporation, groundwater; structure design floods; reservoir storage and flood routing; urban run-off and drainage. Relevant laboratory exercises.

**7716 Hydrotechnical Engineering** examines the theory and application of steady gradually-varied flow in artificial and natural open channels together with an introduction to appropriate software; erosion protection and mobile-boundary hydraulics; problems with ice in rivers. The design of spillways, energy dissipaters, and culverts; physical scale models. Introduction to waterhammer and surge tanks. Relevant laboratory exercises.

**7718 Environmental Geotechniques** examines the basic soil mineralogy; soil water interaction; typical wastes and contaminants; soil contaminant interaction; introduction to advection, adsorption, and diffusion; basic contaminant transport modeling for solutes and NAPL; site investigation and sampling; containment structures and liners; design and monitoring of landfills; relevant field work and laboratories.

**7723 Geotechnical Engineering III** examines the subsurface exploration and site characterization; offshore geotechnical engineering; embankment dams; deep foundations; behaviour of soil materials under static and dynamic loads; numerical methods in geotechnical engineering; practical application of geotechnical engineering principles to foundation and earth structure design and construction.

**7745 Highway Engineering** examines the design and construction of highways including driver, vehicle and road characteristics; highway location and geometric design; soil classification; subgrade and base materials; highway drainage; flexible and rigid pavement; highway economics. Relevant laboratory exercises.

**7748 Project Planning and Control** is an introduction to types of contracts, project delivery approaches, and prevailing contractual relationships; basic project management techniques for network planning and scheduling (CPM and PERT); principles of resource productivity databases, preliminary estimating, and detailed bid preparation; quantitative approaches for effective control of time, cost, resource, quality, and value of constructed facilities; use of computer software for scheduling, estimating, and control.

**7800 Electrical and Computer Engineering Design Project I (1 cr. hr.)** is a course during which each student is required to work independently on the development of the specification and design for a project of Electrical and Computer / Computer Engineering pertinence. Projects will normally be open-ended and involve design of hardware and / or software components. Lectures will be scheduled as required.

**7811 Antennas** examines the fundamentals of electromagnetic radiation; antennas and antenna impedance; dipole antennas; antenna arrays; long wire antennas; aperture-type antennas; receiving antennas.

**7813 Electromagnetics for Communications II** is a review of electromagnetic wave propagation in transmission lines; Smith's chart and impedance matching; wave propagation in twisted pair wires, coaxial cables, striplines, rectangular waveguides, circular waveguides and optical waveguides; radiation and antennas.

**7814 Electromagnetics for Communications** examines Vector calculus; Green, Stokes and Gauss' theorems; Maxwell's differential and integral equations; steady-state and time-varying aspects of Maxwell's equations; uniform plane wave propagation in various media; applications of electromagnetics in communications.

**7824 Discrete-Time Systems and Signals** examines Sampling Theory; elementary discrete-time signals; discrete-time linear and time-invariant systems; the convolution sum; linear constant-coefficient difference equations; the discrete-time Fourier series; the discrete-time Fourier transform; frequency response; frequency mapping from continuous-time to discrete-time; the Fast Fourier Transform (FFT); the z-transform and transfer functions; introduction to digital filter design techniques; digital signal processing applications. Relevant software lab exercises will be included.

**7844 Power System Analysis** is an introduction to electric power systems; per unit quantities; transmission line parameters; modelling of power system components; single line diagrams; network equations formulation; bus impedance and admittance matrices; load flow analysis and control; design of reactive power compensation for power system performance enhancement; tap changing, auto and control transformers for power system application; symmetrical components; fault studies. Relevant laboratory exercises and computer-aided analysis and design.

**7846 Power Electronics** covers an overview of power semiconductor switches; introduction to energy conversion and control techniques; uncontrolled rectifiers; phase-controlled converters; switch-mode dc/dc converters; variable frequency dc/ac inverters; ac/ac converters; design of thyristor commutation circuits, gate and base drive circuits, and snubber circuits; thermal models and heatsink design. Relevant laboratory exercises.

**7855 Communications Electronics** covers an introduction to communications systems components; review of linear amplifiers; linear amplifier design and characteristics using s-parameters; power amplifiers; mixers; oscillators; modulator/demodulator circuits and subsystems; integration of subsystems into analog and digital communication systems. Relevant laboratory exercises and computer-aided analysis and design.

**7858 Industrial Controls and Instrumentation** examines control and instrumentation system components; control devices and transducers; instrumentation and signal processing circuits; analog/digital interface circuitry and data acquisition systems; noise, grounding and shielding; analog and digital controllers; programmable logic controllers and microcontrollers; design of closed-loop control systems; applications in process and robot control; design and implementation of PC-based virtual instrumentation; design, implementation, and testing of process control subsystems. Relevant laboratory exercises and projects.

**7863 Operating Systems and File Organization** examines the history, evolution, and philosophy of operating systems; process scheduling, synchronization and management; memory and device management; file systems and database systems; security and protection; communications and networking; distributed and real-time systems.

**7893 Software Engineering** examines the process of software development; issues related to large-scale software projects; the goals of software engineering; life cycles; documentation; software project management; software specification and development from feasibility to

maintenance; safety critical systems; tools; standards. This course includes a team project.

**7901 Heat Transfer II** examines numerical heat transfer. Fundamentals of convection heat transfer: thermal boundary layer; heat transfer coefficients; heat transfer in turbulent boundary layers. Empirical correlations for forced and natural convection heat transfer. Introduction to phase change heat transfer. Design of heat transfer devices and processes. Relevant laboratory exercises.

**7903 Mechanical Equipment** examines performance characteristics of mechanical equipment: fluid power devices; heat transfer devices; mechanical drives. Relevant laboratory exercises.

**7934 Finite Element Analysis** examines the basis of the finite element method. Continuum mechanics applications: beam problems; fluid mechanics problems; heat transfer problems. Relevant computer laboratory exercises.

**7936 Mechanical Project I** is the first of two capstone design courses in the Mechanical Discipline. In this course mechanical students are organized into small groups or teams which must complete a common design challenge. The project is presented as an open ended problem statement with specific performance objectives. The system must be designed, prototyped and tested during the course of the term. Each team acts as a small consulting firm and is required to document its project planning as well as its design.

**7943 Production and Operations Management** examines the overview of production and operations management; plant layout and process planning; process flow analysis and simulation; capacity planning and scheduling; inventory and resource management; manufacturing accounting principles; process costing; activity based costing. Relevant computer laboratory exercises.

**7944 Robotics and Automation** examines industrial robot arms: direct and inverse kinematics, kinetics, singular configurations, dynamics formulations, motion and load control, trajectory planning; setup and programming of automation equipment; introduction to machine vision: hardware and software; industrial applications. Relevant laboratory exercises.

**7945 Machine Dynamics** is dynamics formulations, dynamics simulations, loads on mechanisms, engine dynamics, balancing, cam dynamics, and relevant laboratory exercises.

**7962 Computer Aided Engineering** examines advanced Computer Aided Design (CAD): parametric construction and assembly modelling, computer animation, finite element modelling applications; Computer Aided Manufacturing (CAM) software for Computer Numerically Controlled (CNC) machine code generation; Coordinate Measurement Machines (CMM) and reverse engineering for rapid prototyping applications; data exchange and data management. Relevant laboratory exercises.

## 6.8 Term 8 Courses

**8000 Ocean and Naval Architectural Engineering Project** examines the execution of design project selected and approved in Term 7. The project must illustrate the application of previous design related courses, i.e., decision methods, impact assessments and application of technology. The subject may be ship design, marine system, directed research or a unique design solution. Lectures will be scheduled as required.

**8003 Small Craft Design** examines the fundamentals of naval architecture as practiced in small craft design are presented and a methodology developed for a variety of craft: tenders, lifeboats, planning vessels, dinghies, coastal cruisers and large, state of the art racing yachts. The emphasis is on recreational craft of all sizes, with special emphasis on sailing vessels. Special topics, such as choice of material of construction, scantlings, performance prediction, seaworthiness, tank testing, modern construction materials and techniques are covered. Specific design problems unique to small craft will be covered such as; mast design and sail area determination, and the state of the art in performance prediction. Students will do a design of their choice over duration of the course. Small weekly design studies will be required.

**8030 Hydroelasticity** - inactive course.

**8048 Maintenance of Engineering Systems** - inactive course.

**8054 Advanced Marine Vehicles** examines the concepts used in the design of advanced marine vehicles. Emphasis will be given to: structural design of craft constructed from fibre reinforced plastics; high speed marine vehicles (powering, structures, seakeeping and model testing); small craft. Relevant laboratory exercises.

**8058 Submersibles Design** examines the formulation of mission statement, understanding various design constraints and reviewing the historical developments of submersibles design. Study of the hydrostatics principles of floatation, stability and control of submersibles. Performing resistance and propulsion calculations. Study of maneuvering and control equations. Survey of different materials and their selection criteria. Design of pressure hulls. Structural design of submersibles. Study of various support systems. Relevant laboratory exercises.

**8090 Special Topics in Marine Hydrodynamics**

**8091 Special Topics in Marine Structures**



**8092 Special Topics in Marine Engineering****8401 Nonlinear Optimization** - inactive course.**8441 Experimental Design for Engineers** - inactive course.

**8600 Offshore Oil and Gas Engineering Project** is a multidisciplinary design project that illustrates the application of previous engineering science and design related courses. Projects will be done by teams of students with individuals concentrating their participation in their own engineering discipline. The project topic will be from the offshore oil and gas engineering industry. Lectures will be scheduled as required.

**8601-8610 Special Topics Related to Engineering** are seminar courses and/or personal study for undergraduates in their final terms who wish to gain more specialized knowledge in a particular field of Engineering than is possible through the standard course offerings. This will allow for one or more students to gain in-depth knowledge of a special topic through directed self-study and/or seminars. The student's discipline group will consider suggestions for Study Topics courses. Such a course should normally be approved by the Undergraduate Studies Committee at least three months before the start of the semester in which it is to be taken. Prerequisites: Permission of the student's Discipline Chair.

**8614 Occupational Hazards and Hygiene** - inactive course.**8621 Oceanography for Engineers** - inactive course.**8623 Remote Sensing** - inactive course.**8624 Fisheries Engineering** - inactive course.**8641 Management Systems II** - inactive course.**8643 Work Systems Design** - inactive course.

**8670 Reliability Engineering** is an introduction to reliability engineering; Physics of failure and failure mechanisms; Reliability measures and assessment; Reliability of components and parts; Complex System Reliability and Availability Analysis; Field Reliability Assessment; Case Studies and Project.

**8671 Safety and Risk Engineering** is an overview of safety and risk issues in the offshore oil and gas industry; Regulatory requirements; Hazards and structured analysis tools; Risk Terminology and Quantified risk analysis (QRA) techniques; and Safety assessment studies; Project and case studies.

**8672 Environmental Aspects of Offshore Oil Development** - inactive course.**8673 Subsea Geotechnical Engineering** - inactive course.**8674 Design for the Ocean and Ice Environments** - inactive course.**8675 Offshore Structures and Materials** - inactive course.

**8680 Process Control and Instrumentation** covers the measurement of pressure, level, flow and temperature; safety valves and safety relief devices; calibration; process analyzer and sample handling systems; instrumentation in hazardous locations; control system safety and reliability; feedback systems; control systems simulation; control examples. Relevant laboratory exercises.

**8690 Reservoir Engineering** examines fluid pressure regimes, oil recovery factors, calculation of hydrocarbon volumes, reservoir rock characteristics, reservoir fluid properties, porosity and permeability, material balance, well test analysis.

**8691 Petroleum Production Engineering** examines the procedures and equipment necessary for preparing a well to produce hydrocarbons and maximizing flow rate during the life of the well. Well completion configurations, tubulars, packers and subsurface flow control devices, completion and workover fluids, perforating oil and gas wells, formation damage, surfactants for well treatment, hydraulic fracturing, acidizing, scale deposition, removal, prevention, workover and completion rigs, and artificial lift.

**8692 Drilling Engineering for Petroleum Exploration and Production** covers both offshore and onshore drilling operations and includes: rotary drilling rig operations, well construction sequence, drill string, drill bits, wellbore hydraulics, casing and wellheads, cementing, well control, directional and horizontal drilling, well planning and fishing operations, and extended reach, horizontal and multi-lateral well drilling techniques.

**8693 Petroleum Facilities Engineering** examines the design of oil and gas field separation and treatment facilities: principles of facilities engineering, pressure vessel design, piping systems, oil, gas and water separation, heaters and treating systems, valves, pumps, hydrates, heat exchange units and indirect fired heaters, gas treatment, facilities optimization, and de-bottle necking.

**8694 Downstream Processing** includes: oil and natural gas processing; oil and gas storage facilities and their design; oil and gas separation processes; petroleum refining processes; and an overview of petrochemical industries.

**8700 Civil Engineering Project** is a practically oriented design project integrated over the five areas in which Civil programs are offered. Students

will operate in consultant groups and will complete a design for a typical Civil Engineering undertaking. Lectures will be scheduled as required.

**8705 Structural Building Systems** examines geometries, loads, safety and serviceability, procedure of using the national building code for evaluating the governing loads on structural members. Design of low rise concrete, timber and steel buildings. Lateral load-resisting elements and bracing systems. Design of foundation systems, footing design, pile cap design, pile group analysis using elastic centre method and inclined pile analysis. Prestressed concrete concepts: strength of flexural members, shear reinforcement for prestressed concrete beams. Relevant Laboratory exercises.

**8706 Analysis and Design of Structural Components** - inactive course.**8707 Maintenance and Rehabilitation of Structures** - inactive course.

**8713 Municipal Engineering** examines the planning of municipal services; estimating water demands; design and analysis of water distribution systems and appurtenances; methods of water treatment; estimating waste water quantity; design of sanitary sewer systems; methods of waste water treatment; solid waste disposal and management. Relevant laboratory, field trips, and case studies.

**8717 Environmental Assessment, Monitoring and Control** examines environmental assessment, audits, law and regulations; water and air quality modelling; environmental risk assessment; pollution monitoring and sampling network designs; statistical analysis; site remediation and hazardous waste management. Relevant laboratory and field exercises.

**8746 Traffic and Transportation Engineering** examines traffic engineering studies; fundamental principles of traffic flow; intersection control; highway capacity and level of service; pavement maintenance and rehabilitation; introduction to airport engineering. Relevant laboratory exercises.

**8749 Construction Planning Equipment and Methods** examines construction equipment selection and utilization; earthmoving including use of explosives; case studies of major civil projects; principles of project planning and control; computer applications to the construction industry. Relevant laboratory/field exercises.

**8751 Coastal and Ocean Engineering** examines the coastal and ocean environment; ocean circulation and properties; waves and tides; instrumentation and measurement. Additional topics will be drawn from the areas of hydraulic, geotechnical and structural engineering. Relevant laboratory/field exercises.

**8790-8799 Special Topics in Civil Engineering**

**8800 Electrical and Computer Engineering Design Project II** is a course during which each student is required to work independently on a design project having Electrical and Computer /Computer Engineering pertinence, and to present written and oral reports on this work. Projects will normally be open-ended and involve design, implementation and testing of hardware and/or software components. Lectures will be scheduled as required.

**8801-8805 Special Topics in Computer Engineering****8806-8809 Special Topics in Electrical Engineering****8813 Propagation and Diffraction** - inactive course.

**8821 Digital Signal Processing** is a review of discrete-time systems and signals and sampling theory; transform analysis of discrete-time LTI systems; implementation of digital filter systems; design of IIR and FIR digital filters; discrete Fourier transform and the Fourier analysis of signals; applications of digital signal processing.

**8826 Filter Synthesis** is an introduction to analog filters; descriptive terminology, transfer functions and frequency response of filters; design of first order passive and active filters; design and analysis of biquad circuit, Sallen key circuit, multiple feedback circuit and state variable filter; RC-CR transformation; inductance simulation circuit; cascade design principle; design of filters with maximally flat magnitude response; design of filters with equal ripple magnitude response; design of Bessel-Thomson filters; analysis and design of switched capacitor filters; use of Matlab for design of analog filters. Relevant laboratory exercises.

**8845 Power System Operation** examines generator scheduling; economic operation, reliability and unit commitment; power system stability; power system protection.

**8846 Power Electronic Systems** - inactive course.

**8863 Introduction to LSI Design** is an introduction to ASICs and ASIC design methodology; basic concepts of digital logic design tools and ASIC technology libraries; partitioning for logic synthesis and VHDL coding; constraining designs, synthesizing, simulation and optimization; design for testability; layout and post-layout optimization and SDF generation; static timing analysis. Relevant laboratory exercises.

**8874 Telecommunications System Design** covers fundamental system design and evaluation; link calculations, system noise; noise characterization; linear and nonlinear distortions, transmission emission, receiver interferences, propagation characterization and counter-measure techniques, performance evaluation; multiplexing and multiple access; various applications such as line-of-sight microwave links, satellite communication systems, land mobile communication systems and optical

communication systems.

**8878 Image Communications** - inactive course.

**8879 Digital Communications** examines baseband digital transmission; intersymbol interference (ISI), partial response signalling, maximum likelihood receiver, matched filter, correlation receiver and error probability performance; source coding; the concept of information; entropy, Huffman code; linear predictive coding; channel coding; block codes, convolutional codes; modulation and coding trade-offs; bandwidth and power efficiency, spread spectrum techniques.

**8882 Biomedical Engineering** examines the physiology of nerves, muscle and the cardiovascular and cardiopulmonary systems; engineering measurement techniques as applied to these systems - electrodes and transducers; electromedical equipment - the ECG machine, defibrillators, electrosurgical units and patient monitors; medical imaging - X-ray, CT scanner and Nuclear Medicine; industrial considerations - work, heat, human factors, electrical safety and CSA codes. Relevant laboratory exercises.

**8893 Concurrent Programming** covers operating systems concepts. Survey and classification of parallel and distributed architectures; vector processor, array processor, shared-memory multiprocessor, message-passing multicomputer, distributed systems, and computer networks. Shared-memory and message-passing programming techniques. Study of classical concurrent problems; critical section, producer/consumer, readers/writers, dining philosophers, and resource allocation. Correctness of concurrent programs: partial and total correctness, safety and liveness properties. Performance analysis of algorithm- architecture combinations. Relevant programming assignments.

**8903 Mechanical Systems** examines mechanical systems design. System simulation and control. Performance optimization and evaluation. Equipment selection for overall system design. Case studies. Relevant laboratory exercises.

**8904 Flow Structure Interactions** examines Vortex shedding phenomena.

Lifting surface oscillations. Membrane and panel flutter. Pipe flow vibrations. Hydraulic transients. Tube bundle vibrations. Acoustics of enclosures. Wave structure interactions. Relevant laboratory exercises.

**8935 Pressure Component Design** examines the traditional design methods; load types: sustained, cyclic, impact; failure modes and mechanisms; incremental collapse; plastic shakedown; residual and thermal stresses; limit analysis: upper and lower bound approximations; damage tolerant design; rational design procedures; case studies: cylinders; plates; shells. Relevant laboratory exercises.

**8936 Mechanical Project II** is the second of two capstone design courses in the Mechanical Discipline. Building on the skills acquired in the first, student teams each choose a unique design challenge and then proceed to generate a solution. The problem statements are often drawn from industry and, where possible, interdisciplinary interaction is encouraged (for example, with business, computer science, or other engineering disciplines). In most cases, the problem proponent will act as the "client" and the team is expected to manage the client interaction process as well. Significant emphasis is placed on both oral and written communication of both the process and the results. Where possible, each system, or a critical component of it, will be prototyped and tested.

**8943 Computer Integrated Manufacturing** - inactive course.

**8944 Quality Management and Control** - inactive course.

**8962 Corrosion and Corrosion Control** examines forms of corrosion. The electrochemical nature of the corrosion process. The mixed potential theory - Pourbaix Diagrams and Evans Diagrams. Corrosion testing, control use by use of materials, selection, cathodic protection, inhibitors and coatings. Case studies of selected corrosion problems. Relevant laboratory exercises.

**8970-8979 Special Topics in Mechanical Engineering**

## 7 Continuing Engineering Studies

In this current era of technological advancement it is necessary that practicing engineers continually keep pace with the changes relevant to their area of interest in order that the public trust, legislated to them, is justified and maintained. Although the primary responsibility for this rests with the individual engineer there is a need for a structured means, other than existing graduate programs,

to abet this continuing educational process. The Faculty of Engineering and Applied Science, through its Continuing Engineering Studies Committee and with the endorsement of the Professional Engineers and Geoscientists of Newfoundland and Labrador (PEG-NL), has developed the following programs of seminars and short courses for this purpose. These programs are one means by which practicing engineers may maintain and improve their competence.

The content of each program is formulated and prepared to reflect an anticipated need, or in response to a need expressed by the professional community. Information on each pending program is advertised in the media and in selected professional and trade correspondence. Although the programs are directed at practicing engineers other interested persons with equivalent background may participate. The Faculty, however, reserves the right to restrict participation as stipulated by specific admission requirements or as it otherwise deems appropriate or necessary. If response warrants, each program (or some part thereof) is then presented in St. John's (on or off-campus), or in any other centre as required. Instruction is normally the responsibility of a team of university, industry, and government specialists selected for that program. A participant's successful completion of each program's requirements is recognized by the University in the form of a testamur, certificate, or diploma as designated to the particular program.

Further information may be obtained through the office of the Director of Continuing Engineering Education.

### 7.1 Diploma Programs

A diploma program comprises an integrated series of seminars, short courses and other study session directed at a specific subject area.

A diploma program consists of a minimum of seven courses plus a project course. The program of instruction is comprised of three components: a core component consisting of a minimum of three courses, an elective component consisting of a minimum of four courses, in addition to a project course. The project course usually has weight to that of two regular courses. The program normally requires a minimum of three terms to complete.

The Continuing Engineering Education Committee, on behalf of Faculty Council, determines the courses that constitute a diploma program from the list of courses given at the end of this section. The Committee can also choose other available University courses to be included in a diploma program.

The following is a list of diploma programs offered by the Faculty:

1. Diploma in Advanced Studies in Civil, Electrical and Computer, Mechanical and Ocean Engineering
2. Diploma in Advanced Studies in Environmental Engineering and Applied Science
3. Diploma in Advanced Studies in Safety, Risk and Integrity Engineering
4. Diploma in Engineering Management

### 7.2 Certificate Programs

A certificate program comprises an integrated series of seminars, short courses and other study sessions directed at a specific subject area. A minimum of six courses plus a project is required. Each certificate program is comprised of three components: a core component consisting of a minimum of three courses, an elective component consisting of at least three courses and a project course. The project course usually has the same weight as a regular course.

The Continuing Engineering Education Committee, on behalf of Faculty Council, selects the list of courses, which constitutes a certificate program from the list of courses given at the end of this section. The Committee can also choose other available University courses to be included in a diploma program. Currently, the Faculty offers a certificate program in Electrical Maintenance for Engineers. The program normally requires a minimum of two terms to complete.

### 7.3 Application for Admission

The diploma and certificate programs are the responsibility of the Faculty of Engineering and Applied Science and are intended for professional engineers. Applications for admission should be made to the program on appropriate forms available from Continuing Engineering Education, Faculty of Engineering and Applied Science. Entry to the program is not normally restricted to any particular time of year, rather completed applications are judged by an Admissions Committee as soon as possible after they reach the CEE office. To ensure that applications are processed as quickly as possible, applicants should provide complete documentation and transcripts with the application form.

### 7.4 Admission Requirements

Normal entrance requirement is one of the following:

1. Membership in the Professional Engineers and Geoscientists of Newfoundland and Labrador (PEG-NL).
2. A Bachelor of Engineering degree from a recognized university, and three years experience in engineering work. Individuals who do not possess the qualifications listed above may be admitted to the certificate or diploma program if they can satisfy the Faculty of Engineering and Applied Science that they have qualifications and experience which ensure a reasonable chance of success in the program.

### 7.5 Exemptions and Equivalent Credit

A student who has taken previous technical courses which have not been applied for previous credit may be exempted from taking similar courses in a Diploma Program, up to a maximum of two courses. Normally courses taken within the past two years and for which the student's work was formally evaluated will be considered for exemption. Exemption for courses taken more than two years in the past may be granted by the Admissions Committee.

Students requesting exemptions should apply in writing to the Director of Continuing Engineering Education, with supporting documentation about the course(s) they hope to use for substitute(s). Documentation must include an official course outline or calendar description and a transcript of the grade(s) obtained.

### 7.6 Substitute Courses

Where a course in a Diploma Program has had to be cancelled, registrants to this course may be allowed to attend a similar course which may be offered as part of some other program at the University, should space permit. They will receive credit for the substitute course towards their diploma.

Students requesting credit for substitute courses should apply in writing to CEE prior to taking the course with an official outline or calendar description of the course(s) they wish to substitute.

### 7.7 Format

The format of the courses offered as part of this program will be varied. In addition to the normal lecture-type courses offered at evening sessions, there may be day seminars, and short intense courses running a week or more. The format for courses offered in any semester will be announced by CEE prior to the beginning of that semester.

### 7.8 Evaluation

Each course in the diploma program will contain an evaluation procedure established by the instructor for that course. A mark of 60% must be achieved in each course taken in order to obtain credit.

### 7.9 Faculty

Most courses are offered by a team of instructors drawn from the Faculty of Engineering and Applied Science, other faculties, and specialists from industry.

### 7.10 Period of Study

Normally a student will complete the Diploma Program in two years. If he/she cannot complete it in two years, the student may apply to the Diploma Committee for an extension, which may be granted for one year. A maximum of three extensions may be granted. This means that the total extended period including the normal time of two years will not exceed five years.

### 7.11 Testamur Programs

A testamur program is normally a single course, seminar, symposium, or other study session directed at a specific subject area and which is presented over a one to four day period. Normally there are no evaluation procedures applied to these programs.

Specific testamur programs are not listed in the Calendar. Brochures containing information on the subject matter, fees, dates, places, and registration are distributed through an extensive mailing list, and advertised in the media and selected trade and professional correspondence. A registration form is contained in each brochure or is available from the Director of Continuing Engineering Education.

### 7.12 Program Cancellation

The Faculty reserves the right to postpone or cancel any program, in whole or in part, due to insufficient advance registration or for any other reason it deems appropriate. Any fees paid in advance will be returned subject to the terms and conditions on the registration form.

### 7.13 List of Courses Offered By Continuing Engineering Education

The following courses are not applicable to any undergraduate or graduate program offered by the Faculty of Engineering and Applied Science. For applicability of courses towards diplomas and certificates in Engineering, contact the Continuing Engineering Education Office by telephone to (709) 737-7467, in-person at EN 3017, or through the website at <http://www.engr.mun.ca/programs/cee/>.

6002 Environmental Chemistry and Toxicology  
 9000 Basic Safety, Reliability, Risk Concepts and Legislation  
 9001 Statistical Quality Control and Design of Industrial Experiments  
 9002 Uncertainty, Risk and Reliability Analysis for Engineers  
 9003 Risk and Decision Analysis Applied to Engineering Systems

9004 Advanced Reliability and Risk Analysis  
9007 Corrosion Engineering  
9008 Fire and Explosion Engineering  
9009 Introduction to Petroleum Technology  
9010 Introduction to Sub-Sea Technology  
9011 Introduction to Drilling Technology  
9012 Reliability of Software, Safety Critical Electrical/Electronic Systems  
9013 Reliability of Structural Systems  
9014 Fatigue and Fracture Mechanics  
9015 Introduction to Environmental Engineering  
9017 Environmental Risk Analysis  
9018 Overview and Introduction to Ergonomics  
9019 Introduction to Occupational Medicine  
9020 Introduction to Occupational Hygiene  
9500 Technical Communications  
9512 Project Planning and Management  
9600 Project Course for Diploma Programs  
9612 Waste Management  
9614 Municipal Solid Waste Management  
9620 Environmental Sampling and Analysis I  
9621 Introduction to Environmental Statistics  
9622 Environmental Management System  
9624 Computer Applications in Environmental Science and Engineering  
9625 Environmental Sampling and Analysis II  
9630 Air Pollution  
9800 Project Course for Certificate Programs  
9810 Computer Applications I for Certificate Programs  
9812 Computer Applications II for Certificate Programs  
9820 Electric Machines and Power Electronics  
9822 Electrical Power Systems Analysis and Design  
9825 Electrical Equipment and Standards

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**Dean**

Gorman, G.G., B.B.A. *St. Francis Xavier*, M.B.A. *Western Ontario*, Ph.D. *Stirling*; Associate Professor

**Associate Dean (Academic Programs)**

Clift, T.B., B.Comm.(Co-op) *Memorial*, M.B.A. *Dalhousie*; Associate Professor

**Associate Dean (Research)**

Parsons, B.J., B.Comm.(Co-op)(Hons.) *Memorial*, Ph.D. *British Columbia*; Professor; Cross appointment with Department of Computer Science

**Vector Aerospace Chair in Irish Business Studies**

Stewart, D.B., B.Sc.(Hons.) *Strathclyde (Glasgow)*, M.Sc. *City (London)*, Ph.D. *Strathclyde (Glasgow)*; Professor

**Fellow in International Business**

Burns, M.E., B.A.(Hons.), M.A. *Essex*; Professor

**Director, Centre for International Business Studies**

Vaughan, S.M., B.A., M.B.A. *Memorial*

**Director, Centre for Management Development**

Morrissey, W.J., B.A.Ed., M.Ed. *Memorial*

**Director, P.J. Gardiner Institute for Enterprise and Entrepreneurship**

Simmons, B.L., B.Comm., M.B.A. *Memorial*

**Manager, Academic Programs**

King, C.A., B.Comm.(Co-op), M.B.A. *Memorial*

**Manager, Finance and Administration**

Wroblewski, V.F., B.A.Music, B.Ed. *Acadia*, B.Comm. *Dalhousie*, C.A. (Nova Scotia)

**Professors**

Barnes, J.G., B.A., B.Comm. *Memorial*, M.B.A. *Harvard*, Ph.D. *Toronto*

Faseruk, A.J., B.A. *Queen's*, B.Comm., M.B.A. *Dalhousie*, D.B.A. *Kentucky*, M.T.S. *Queen's College*; Winner of the President's Award for Distinguished Teaching, 1989-1990

Kubiak, W., M.Sc. *Tech. Univ., Gdansk*, Ph.D. *Polish Academy of Sciences, Warsaw*; Winner of the President's Award for Outstanding Research, 1995-1996

May, J.D., B.Comm. *Queen's*, D.Phil. *York (England)*; Cross appointment with Department of Economics

Saha, S.K., B.Com., M.Com. *Rajshahi*, M.B.A., Ph.D. *British Columbia*

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Skipton, M.D., B.Sc. *Bristol*, M.Sc., M.Sc.(Management), D.Phil. *Warwick*

Withey, M., B.A. *Queen's*, M.A. *McMaster*, M.B.A., Ph.D. *Queen's*

**Associate Professors**

Brown, T.C., B.A. *Memorial*, M.I.R., Ph.D. *Toronto*

Cumby, J.A., B.B.A. *St. Francis Xavier*, M.B.A. *Memorial*, F.C.A. (Newfoundland)

Cummins, G.M., B.Com. *Acadia*, M.B.A. *Alberta*, LL.B. *British Columbia*; Barrister and Solicitor: Ontario, Newfoundland and British Columbia; Notary Public, Newfoundland

Downer, P.A., B.Comm.(Co-op)(Hons.), M.B.A. *Memorial*, F.C.A. (Newfoundland); Winner of the President's Award for

Distinguished Teaching, 2003-2004

Foster, K.D., B.Sc. *UNB*, M.B.A., Ph.D. *Dalhousie*

Gallagher, K., B.A. *McGill*, M.B.A., Ph.D. *British Columbia*

Gupta, R.K., B.Sc., M.Sc. *Agra*, M.B.A. *Indian Institute of*

*Management, Calcutta*, M.S., Ph.D. *Rochester-Simon*

Hanlon, D.J., B.A., B.Ed. *Windsor*, M.B.A. *Memorial*, Ph.D. *Stirling*

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King, W.F., B.Comm. *Memorial*, M.B.A. *McMaster*, C.A.

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Palasvirta, A., B.A., Ph.D. *Utah*

Pittman, J.A., B.Comm.(Co-op)(Hons.), M.B.A. *Memorial*, Ph.D.

*Waterloo*, C.M.A., C.A. (Newfoundland)

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Ph.D. *Waterloo*

Roy, J.P., B.Sc.(Hons.), M.I.R. *Toronto*

Tulett, D.M., B.Sc., Ph.D. *Queen's*

Wong, S.L., M.Sc.(Management) *Durham*, F.C.M.A.(U.K.),

Chartered Management Accountant, F.C.C.A.(U.K.), Chartered

Certified Accountant, Cert.Ed.(Birmingham); Educational

Director of the Certified Management Accounting Program

Wyse, J.E., B.Sc., M.B.A. *Memorial*, Ph.D. *Western Ontario*,

C.D.P., I.S.P.

**Assistant Professors**

Arnold, K.A., B.A. *Ottawa*, M.B.A. *McMaster*, Ph.D. *Queen's*

Bauer, L.L., B.Sc., Ph.D. *Alberta*

Coady, P.A., B.Comm.(Co-op) (Hons.), M.B.A. *Memorial*, C.A.

(Newfoundland); Winner of the President's Award for

Distinguished Teaching, 2004-2005

Cooke, G.B., B.Math., B.A. *Waterloo*, M.B.A. *Wilfrid Laurier*, Ph.D.

*McMaster*

Dearness, J.A., B.A. *Alberta at Calgary*, M.B.A. *Toronto*

Dupre', K.E., B.A.(Hons.) *Queen's*, M.Sc., *St. Mary's*, Ph.D.

*Queen's*

Guedhami, O., B.A. *HEC*, M.Sc.(finance) *HEC Montreal*,

Ph.D.(finance) *Laval*

Jaya, P.S., B.A.(Hons.), M.A. *Delhi School of Economics*, Ph.D.

*Rhode Island*

Komiak, S.X., B.Eng. *Tsinghua (China)*, M.Ec. *Fudan (China)*,

Ph.D. *British Columbia*

Morrissey, L.M., B.Comm.(Co-op)(Hons.), M.B.A. *Memorial*

Stapleton, D., B.Sc., M.B.A. *Memorial*

Verma, M., B.A.(Hons.) *Delhi*, M.B.A., Ph.D. *McGill*

Wetsch, L.R., M.B.A. *Massey (New Zealand)*, M.Sc. *Queen's*

White, B., B.Sc. *Dalhousie*, B.A. *Mount Saint Vincent*, M.B.A. *Saint*

*Mary's*

**Lecturers**

Furey, M., B.Sc., B.Ed., M.B.A. *Memorial*

Myrden, S., B.Comm.(Co-op) *Memorial*, M.B.A. *North Carolina at*

*Greensboro*

**Business Co-operative Education**

Joyce, H., B.Comm., M.B.A. *Memorial*; IPMA-CP; Co-ordinator

Noseworthy, S., B.A., B.Ed., M.B.A. *Memorial*; Program Manager

Raheja, V., B.Comm. *Madras*, M.B.A. *Memorial*, A.C.A. (*Institute of*

*Chartered Accountants of India*); Co-ordinator

Skanees, H., B.Comm. *Memorial*, M.B.A. *York*; Co-ordinator

## 1 Programs in Business Administration

The following undergraduate programs are available in the Faculty:

1. Bachelor of Commerce (Co-operative)
2. Bachelor of Commerce (Co-operative) (Honours)
3. Bachelor of Commerce
4. Bachelor of Commerce (Honours)
5. Diploma in Business Administration
6. Bachelor of Business Administration
7. Bachelor of Business Administration (Honours)
8. International Bachelor of Business Administration (iBBA)
9. International Bachelor of Business Administration (iBBA) (Honours)
10. Minor in Business Administration

### 1.1 Graduate Studies

A program leading to the M.B.A. degree is described in the Graduate Studies section of the University calendar.



## 2 Philosophy of the Business Administration Programs

The Business Administration Programs are designed to provide students with a liberal business education and to prepare students for a creative role in business. The objectives of the program are to provide the graduate with:

1. a working knowledge of the functional areas of an organization,
2. a capacity for self development,
3. a high level of communication skills,
4. the ability to identify and analyze problems and opportunities and collect the relevant data pertinent to these,
5. a sensitivity to human interrelationships,
6. an awareness of subtle interplay of influence, persuasion and power in organizations,
7. an ability to recognize and respond to change,
8. an ability to apply skills to a variety of situations,
9. a sensitivity to the social, cultural and governmental environment.

The program leading to the Degree of Bachelor of Commerce (Co-operative) is set up to provide the student with a combination of academic terms or semesters and full-time work terms in the business environment. These work terms are arranged with the full co-operation of business firms and government enterprises and are supervised. They are designed to provide the student with the opportunity to weld theory and practice and to provide a broader preparation for a work career.

The business environment is becoming ever more complex. The program, therefore, recognizes that it is not enough to give the student theoretical and technical training only. By being exposed, as early as possible, to the environment in which he/she will eventually work, the student will be better able to appreciate that most work is accomplished and goals are achieved by working with and through people operating in a social and organizational setting. Such exposure will also aid the students in defining their own career interests and objectives.

The program leading to the Diploma in Business Administration and the Degree of Bachelor of Commerce is specifically designed to meet the needs of individuals who hold full- or part-time employment and who wish to complement their work experience with theoretical and practical training in business administration. The program provides such individuals with an opportunity to develop the abilities and to acquire the tools needed to deal with a changing work environment.

The program leading to the Degree of Bachelor of Business Administration permits students to combine core studies in the management area with interests in other fields. To that end, students who are enrolled in this program may complete a minor in the faculties of Arts or Science, the School of Music (or other areas with permission) or one of the minors offered at the Sir Wilfred Grenfell College.

## 3 Regulations for Business Minor

1. Students who are completing degrees in the Faculties of Arts and/or Science, or certain degrees in the School of Human Kinetics and Recreation, may complete a minor in Business Administration.
2. Students who wish to undertake the Business minor program must have completed a minimum of ten courses. Application is made in the space provided on the Change of Academic Program Form, which must then be approved by the Dean of the Faculty of Business Administration, or delegate. Admission into the minor program is selective: at the time of application a student must have a cumulative average of at least 65%.
3. A minor in Business Administration shall consist of 24 credit hours comprising the following courses: Business 1000, 1101, 1201, 2301, 4000, 4500, and two courses chosen from Business 1600, 2101, 2201, 3101, 3320, 3700, and 4320.
4. Course prerequisites to all Business courses shall apply to a Business minor. Students should note, for example, that the prerequisites for Business 4500 are Business 1101, Statistics 2500 and Economics 2010. It should be noted that some courses are not offered every semester.

## 4 General Notes

1. The Office of the Registrar and the Faculty of Business Administration will assist students with any questions or problems which might arise concerning the interpretation of academic regulations. It is, however, the responsibility of students to see that their academic programs meet the University's regulations in all respects.
2. No student shall obtain more than one undergraduate degree from the Faculty of Business Administration.
3. The Committee on Undergraduate Studies, Faculty of Business Administration, may recommend that transfer credit for certain Business courses be awarded on the basis of successful completion of professional courses that lead to a professional designation (e.g. C.A., C.G.A., C.M.A.). Applications for transfer credit should be made through the Office of the Registrar.
4. The Faculty of Business Administration may approve that credit for certain Business courses successfully completed through Memorial University of Newfoundland's former Extension Services Division be granted upon application to the Registrar for transfer credit evaluation.

## 5 Appeals Procedures

All of the regulations for business programs 1. to 10. are subject to appeal. Appeals must be made in writing to the Chairperson, Committee on Undergraduate Studies, Faculty of Business Administration and must clearly outline the grounds for the appeal.

## 6 Regulations for the General Degree of Bachelor of Commerce (Co-operative)

### 6.1 Admission Modes and Requirements

#### 6.1.1 Direct Entry (for High School Students)

Students may apply for admission into first year of the Bachelor of Commerce (Co-operative) program (Terms A/B) directly from high school by indicating this in the appropriate place on their Undergraduate Application for Admission/Readmission to Memorial University of Newfoundland. Direct entry from high school is subject to the applicant's final acceptance to the University and admissibility into either Mathematics 1000 or 1090. Terms A/B normally starts in September.

### 6.1.2 Advanced Standing (for Current Memorial University of Newfoundland Students)

1. Students may apply for admission with Advanced Standing into terms beyond Terms A/B up to and including Term 4. Students applying for admission to a term beyond Terms A/B must have completed all of the courses required in the program up to that term, including the courses required in Terms A/B, with grades high enough to have met promotion requirements. Students applying for admission with advanced standing must complete and submit to the Office of the Registrar the Application For Admission to the Faculty of Business Administration, normally on or before the deadlines specified in the University Diary for the semester in which they intend to begin their program.
2. Admission with Advanced Standing is competitive and selective. Prospective students are therefore encouraged to consider an alternate degree program in the event that they are not accepted into the Bachelor of Commerce (Co-operative) program.
3. The primary criterion used in reaching decisions on applications for admission with advanced standing is overall academic achievement. Selection, therefore, will be based on a student's overall academic performance. Students with weak overall academic records are unlikely to be admitted.

### 6.1.3 Transfers From Other Post-Secondary Institutions

1. Students who are transferring from other universities must apply for admission to the University on or before the deadlines specified in the University Diary for the semester in which they intend to begin their program, to allow sufficient time for the evaluation of transfer credits. Subject to items 2. and 3. under **Advanced Standing (for Current Memorial University of Newfoundland Students)** above, transfer students from other universities will be placed in that Term of the program judged by the Admissions Committee of the Faculty to be appropriate considering equivalent credits. Regardless of the Term into which they are admitted, transfer students must complete a minimum of two work terms.
2. Subject to items 2. and 3. under **Advanced Standing (for Current Memorial University of Newfoundland Students)** above, graduates of a three-year community college business diploma program may be considered for admission into Term 3. Space for Term 3 admissions is limited and competitive and admission decisions will be based on overall academic performance. Specific course requirements will be determined on an individual basis at the time of admission.

## 6.2 The Curriculum

1. Every candidate shall complete nine academic terms in the Co-operative Program and shall normally be required to complete three work terms. The 141 academic credit hours are distributed as follows: 30 credit hours over the course of Terms A/B, 18 credit hours in each of Terms 1 and 2, and 15 credit hours in each of Terms 3 through 7.
2. Students who have been admitted to the Bachelor of Commerce (Co-operative) program must complete courses in academic terms or "blocks" in the sequence, order and course load as set out in the table **Bachelor of Commerce (Co-operative) Curriculum**. Exceptions to this prescribed program, including specified course load, must have the approval of the Admissions Committee or of the Committee on Undergraduate Studies of the Faculty.
3. By the end of the Winter semester of their first year, Terms A/B students must have successfully completed the following 30 credit hours:
  - a. Six credit hours in English courses\*;
  - b. Mathematics 1000;
  - c. Economics 2010 and 2020;
  - d. Business 1000;
  - e. Twelve additional credit hours in non-Business courses, at least 9 credit hours of which must be in courses chosen from the Faculties of Arts and/or Science\*\* and/ or the School of Music.

\* It is strongly recommended that students complete English 1110 as one of these English courses.

\*\* Students who wish to complete the joint degrees of Bachelor of Arts and Bachelor of Commerce (Co-operative) [see entry immediately following The Curriculum below] are strongly advised to include courses in a second language and courses in the subject of the intended Major program. Students who wish to complete the joint degrees of Bachelor of Commerce (Co-operative) and Bachelor of Science in Computer Science [see entry immediately following Joint Degrees of Bachelor of Commerce (Co-operative) and Bachelor of Arts below] must complete Computer Science 1710, 3 more credit hours in Mathematics and are strongly advised to complete 3 additional credit hours in Science electives.

4. The usual curriculum of courses and work terms beyond the 30 credit hours required in Terms A/B is as follows:
  - a. Computer Science 2801
  - b. Statistics 2500
  - c. Economics 3150
  - d. Fifty-one credit hours in core Business Administration courses
  - e. Thirty credit hours in elective Business Administration courses, including non-Business courses prescribed for a concentration
  - f. Twenty-one credit hours in non-Business courses, at least 15 of which must be in courses chosen from the Faculties of Arts and/or Science and/or the School of Music.
  - g. Three work terms of four months duration each.

Unspecified credits may not be used to fulfil the requirements outlined in a., b., c., d., and g. above.

5. Notwithstanding clauses 2. and 4. and bullet three of **General Academic Regulations (Undergraduate), Classification of Students**, students do not require special permission to register for courses while on work terms if the courses are in addition to the prescribed program.
6. The need for a specific course(s) or work term requirement may be waived by the Committee on Undergraduate Studies of the Faculty for students who apply for exemption from the course(s) or work term requirement in question.

Note: Students should also refer to the **UNIVERSITY REGULATIONS - General Academic Regulations (Undergraduate)** of the University.

## 6.3 Joint Degrees of Bachelor of Commerce (Co-operative) and Bachelor of Arts

Any student who is admitted into the Bachelor of Commerce (Co-operative) program may simultaneously complete the requirements for a Bachelor of Arts program. Under those circumstances, regulations for the Bachelor of Commerce (Co-operative) program will be relaxed as follows. Notwithstanding clauses 4. e. and 4. f. of **The Curriculum** above, students in the Bachelor of Commerce (Co-operative) program who are concurrently completing the Bachelor of Arts degree will be permitted to make the following adjustments to

those clauses:

1. clause 4. e. - no fewer than 15 credit hours, but no more than 30 credit hours, in Business electives, including non-Business courses prescribed for a concentration.
2. clause 4. f. - no fewer than 21 credit hours, but no more than 36 credit hours, in elective courses chosen from the Faculty of Arts.

These adjustment to the normal curriculum will only be permitted for students who are graduating with the Bachelor of Commerce (Co-operative) degree and the Bachelor of Arts degree at the same convocation. In order to meet all of the requirements of both degree Programs at the same time, students who are completing the joint degrees are strongly advised to follow the table, **Bachelor of Commerce (Co-operative) Curriculum (Completed jointly with the Bachelor of Arts)**.

## 6.4 Joint Degrees of Bachelor of Commerce (Co-operative) and Bachelor of Science in Computer Science

Any student who is admitted into the Bachelor of Commerce (Co-operative) program may simultaneously complete the requirements for a Bachelor of Science in Computer Science degree. Under those circumstances, regulations for the Bachelor of Commerce (Co-operative) program will be relaxed as follows. Notwithstanding clauses 4. a., e. and f. of **The Curriculum** above, students in the Bachelor of Commerce (Co-operative) program who are concurrently completing the Bachelor of Science in Computer Science degree will be permitted to make the following adjustments to those clauses:

1. clause 4. a. - Computer Science 2801 will not be required.
2. clause 4. e. - no fewer than 15 credit hours, but no more than 30 credit hours, in Business electives, including non-Business courses prescribed for a concentration.
3. clause 4. f. - no fewer than 21 credit hours, but no more than 36 credit hours, in elective courses chosen from the Faculty of Science.

These adjustment to the normal curriculum will only be permitted for students who are graduating with the Bachelor of Commerce (Co-operative) degree and the Bachelor of Science degree at the same convocation. In order to meet all of the requirement of both degree Programs at the same time, students who are completing the joint degrees are strongly advised to follow the table, **Bachelor of Commerce (Co-operative) Curriculum (Completed jointly with the Bachelor of Science With a Major in Computer Science)**.

## 6.5 Minor or Cognate From Another Academic Unit

1. A student enrolled in the Bachelor of Commerce (Co-operative) program may, using all of the non-Business electives required in the curriculum, complete a minor within the Faculty of Arts, the Faculty of Science, the School of Music, or offered at Sir Wilfred Grenfell College. Regulations for the minor are given under the Calendar entries for the Faculty of Arts, the Faculty of Science, and the School of Music, and under the Calendar entry for Sir Wilfred Grenfell College.
2. A student enrolled in the Bachelor of Commerce (Co-operative) program may pursue a minor (or equivalent) in other non-business academic units (where minor program exist) with i) permission of that academic unit and ii) permission of the Committee on Undergraduate Studies of the Faculty of Business Administration.

## 6.6 Examination and Advancement

1. The Faculty Council of the Faculty of Business Administration constitutes the examining body for all examinations in Business courses. In addition, the standing of every student will be assessed by the Committee on Undergraduate Studies in accordance with the promotion requirements outlined in Clauses 2., 3., and 8. below.
2. Students in Terms A/B will be considered for promotion to Term 1 at the end of the Winter semester of their first year. At that time, for promotion from Terms A/B, students must have successfully completed the 30 credit hours prescribed in 3. of **The Curriculum** above, with an overall average on those 30 credit hours of at least 65%. Students who do not satisfy these requirements will be required to withdraw from the program and will not be promoted to Term 1.

Students who have been required to withdraw following Terms A/B may be considered for readmission to the program in accordance with the entry under **Admission Modes and Requirements** above, with the heading **Advanced Standing (for Current Memorial Students)**.

A required withdrawal for failure to meet the promotion requirements from Terms A/B will not be reflected on a student's transcript.

3. For promotion from each of Terms 1 through 7, the requirements are the achievement of a passing grade in at least 12 credit hours and an overall average of at least 60% in those courses required in each academic term.

Students in an academic term who do not maintain the appropriate course load as outlined in Clause 2. of **The Curriculum**, with the approval of the Committee on Undergraduate Studies, will be required to withdraw from the program and will not be promoted.

Students completing Terms 1 through 7 who fail to achieve these standards will be required to withdraw from the program. A required withdrawal from any of Terms 1 through 7 will be reflected on a student's transcript.

Students who have been required to withdraw following any one of Terms 1 through 7 may be considered for readmission after the lapse of two semesters, at which time they will normally be required to repeat the term which they failed, unless, in the opinion of the Admissions Committee, Faculty of Business Administration, a more meaningful course of study would be appropriate.

In order to be considered for readmission, students must formally apply for readmission to the program not later than the deadlines specified in the University Diary for the semester in which they wish to recommence their program.

4. The Committee on Undergraduate Studies of the Faculty of Business Administration may promote a student notwithstanding promotion requirements listed in Clause 3. above. A decision of this nature will be made only for reasons acceptable to the Committee on Undergraduate Studies, and in the case of a student thought likely to succeed in future terms.
5. The dates for starting and finishing each work term are shown in the University Diary. Successful completion of the work term requirements is a prerequisite to graduation.
6. A competition for work term employment is organized by Business Co-operative Education. Students may obtain their own work term jobs outside the competition. Such jobs must be confirmed by letter from the employer and approved by Business Co-operative Education on or before the first day of the work period. By entering the competition, students give permission for Business Co-operative Education to supply their university transcripts to potential employers.
7. A work report on a topic approved by Business Co-operative Education must be submitted for each work term. This report must be approved by the employer and submitted to Business Co-operative Education on or before the deadline scheduled by Business Co-operative Education. Evidence of the student's ability to gather material relating to the report, analyze it effectively, and present it in a clear, logical and concise form, will be required in the report. Late reports will not be graded unless prior permission for a late

report has been given by Business Co-operative Education.

8. The overall evaluation of the work term is the responsibility of Business Co-operative Education. The work term shall consist of two components:

Student performance as evaluated by a co-ordinator, given input from the employer, and a work report graded by a co-ordinator or a member of faculty.

Evaluation of the work term will result in the assignment of one of the following final grades:

- a. *Pass with Distinction*: Indicates **EXCELLENT PERFORMANCE** in both the work report and work performance. The student is commended for his/her outstanding performance in each of the required components; pass with distinction has been awarded to each of the work report and work performance.
- b. *Pass*: Indicates that **PERFORMANCE MEETS EXPECTATIONS** in both the work report and work performance. The student fully meets the requirements of a passing work report and completely satisfactory work term performance.
- c. *Fail*: Indicates **FAILING PERFORMANCE** in the work report and/or the work performance.

For promotion from the work term, a student must obtain *PASS WITH DISTINCTION* or *PASS*.

If a student fails to achieve the standards outlined above, the student will be required to withdraw from the program and may be considered for readmission after the lapse of two semesters, at which time the student will be required to complete a further work term with satisfactory performance before being admitted to any further academic term in the Faculty.

9. A student who has been required to withdraw from the program as a result of failing to meet the requirements of either two academic terms or two work terms will not be eligible for readmission to the program.
10. Students are not permitted to drop work terms without prior approval of the Committee on Undergraduate Studies upon the recommendation of Business Co-operative Education. Students who drop a work term without permission, or who fail to honour an agreement to work with an employer, or who conduct themselves in such a manner as to cause their discharge from the job, will normally be awarded a failed grade for that work term. Permission to drop a work term does not constitute a waiver of degree requirements, and students who have obtained such permission must complete an approved work term in lieu of the one dropped.

Note: *Students should also refer to the UNIVERSITY REGULATIONS - General Academic Regulations (Undergraduate) of the University.*

## 6.7 Academic Course Program (Following Promotion From Terms A/B to Term 1)

The curriculum for academic terms following promotion from Terms A/B is as follows:

Note: *Also refer to the table Bachelor of Commerce (Co-operative) Curriculum.*

### Term 1

Business 1101  
Business 1201  
Statistics 2500.  
Nine credit hours from List A below.

### Term 2

Business 2101  
Business 2201  
Business 2301  
The 9 remaining credit hours from List A below not completed in Term 1

### LIST A

Business 1600  
Business 2000  
Business 2401  
Computer Science  
Six credit hours in non-Business electives\*\*.

### Term 3

Business 3320  
Business 3401  
Business 3700  
Six elective credit hours from List B below.

### Term 4

Business 4000  
Business 4320  
Business 4401  
Business 4500  
Economics

### Term 5

Business 5301  
Twelve credit hours chosen from List B below, not completed in Term 3.

### Term 6

Business 7000  
Twelve credit hours chosen from List B below, not completed in Term 3 or 5.

### Term 7

The remaining 15 credit hours from List B below, not completed in Terms 3, 5, and 6.

### LIST B

Thirty credit hours in Business electives, including non-Business courses prescribed for a concentration.  
Fifteen credit hours in non-Business electives\*\*.

\*\*Of the 21 credit hours in non-Business electives required, at least 15 must be chosen from the Faculties of Arts and/or Science and/or the School of Music.

## 7 Regulations for the Honours Degree of Bachelor of Commerce (Co-operative)

An Honours Degree of Bachelor of Commerce (Co-operative) signifies superior academic achievement.

1. To be considered for an Honours Degree, the candidates must so indicate on the prescribed application for graduation form.
2. Candidates for the Honours Degree of Bachelor of Commerce (Co-operative) shall comply with all regulations governing the General Degree of Bachelor of Commerce (Co-operative).
3. A candidate shall:
  - a. maintain at least a 75% average and an average of at least 3.5 points on the courses which comprise the 84 credit hours in Business (including non-Business concentration program courses) as specified in **The Curriculum**, and
  - b. maintain an average of at least 3.25 points on the courses which comprise the total number of credit hours required for the degree, and
  - c. achieve a passing grade in each of the courses which comprise the 84 credit hours in Business.
4. A declared candidate for an Honours Degree who fails to fulfill the conditions of Clause 3. but fulfills the requirements for a General Co-operative Degree shall be awarded the General Degree of Bachelor of Commerce (Co-operative).
5. A student who has been required to withdraw from the program as a result of failing to meet the requirements for promotion from academic Terms 1 through 7 or from Work Terms 1, 2, or 3 will not be eligible for an Honours Degree.
6. Candidates are not permitted to repeat or substitute courses for the purpose of meeting the academic standing specified in Clause 3.

## 8 Business Co-operative Education

General management of the work terms in the Co-operative Program is the responsibility of Business Co-operative Education. Through its co-ordinators, it is responsible for assisting potential employers to become involved in the program, for the continual development of employment opportunities, for arranging student-employer interviews, for counselling of students, for visiting students on their work assignments and for the evaluation of the work term.

Students and employers choose each other through the job competition process. Job advertisements are posted and students may apply for up to twelve positions. Employers interview students, and both the students and employers express their preferences for one another.

Students are then placed by Business Co-operative Education to reflect expressed preferences. Placement is not guaranteed but every effort is made to ensure that appropriate employment is made available. In the case of students who are required to withdraw from the program, Business Co-operative Education has no responsibility for placement until they have been readmitted to the program.

Salaries paid to co-operative students are determined by employers based upon their internal wage structures, and tend to increase as the student progresses through the program and assumes more responsibility. However, students should not expect the income from work terms to make them completely self-supporting.

Students in the Co-operative Program give permission to prospective employers, in the course of the placement process, to have access to their records, which contain their academic marks and their work term evaluations. After accepting a position, students may not withdraw from a specific job situation unless prior permission is obtained from the Dean or his delegate.

## 9 Regulations for the Diploma in Business Administration

1. To be considered for admission to the Diploma Program in Business Administration, applicants must normally have satisfied the following requirements:
  - a. Successful completion of 15 academic credit hours as follows:
    - i. Six credit hours in English;
    - ii. Mathematics 1000;
    - iii. Business 1000;
    - iv. Three credit hours chosen from courses in the Faculties of Arts and/or Science and/or the School of Music.

Only students with an overall average of at least 60% in the courses comprising the 15 credit hours required will be considered for admission to the program.

Overall academic performance is an important criterion in reaching decisions on applications for admission, and will be considered, in addition to the average on the five courses required for admission, in the selection process. Students with weak overall academic records are unlikely to be admitted.
  - b. At least five years of full-time work experience, or equivalent, that is deemed acceptable by the Admissions Committee of the Faculty of Business Administration.
 

In the case where students have been required to withdraw from the Bachelor of Commerce (Co-operative) Program, the Admissions Committee of the Faculty may consider this circumstance as grounds to deny admission
2. To be eligible for the Diploma in Business Administration, a student must:
  - a. have been admitted to the Diploma Program;
  - b. successfully complete the following 45 credit hours in addition to the 15 credit hours required for admission (a total of 60 credit hours):
    - i. Economics 2010 and 2020;
    - ii. Statistics 2500 or equivalent;
    - iii. Computer Science 2801;
    - iv. Business 1101, 1201, 1600, 2301, 2401, 4000, and 4500;
    - v. Four of the following, one of which must either Business 3320 or 4320: Business 2000, 2101, 2201, 3320, 3401, 3700, 4320, and 4401.
  - c. Achieve an overall average of at least 60% in the courses which comprise the 45 credit hours specified in clause 2. b. A student failing to meet this requirement will be required to repeat a course(s) to raise the overall average to the minimum acceptable level.
  - d. Successfully complete a comprehensive case analysis with report (Business 450W).

- e. Students planning to pursue their Bachelor of Business Administration or their Bachelor of Commerce (General) (see regulations for the general degrees of Bachelor of Business Administration and Bachelor of Commerce) are encouraged to note the prerequisites for 7000 (Organizational Strategy) and to plan their courses so that they have completed the prerequisites prior to the semester in which they plan to take 7000.
3. a. Every candidate for the Diploma in Business Administration will be required to complete at least 30 credit hours at this University. The courses comprising these credit hours must be applicable to the Diploma in Business Administration.
- b. Every candidate for the Diploma in Business Administration, who has completed a Bachelor's degree at this University or another recognized university or university college, will be required to complete at least 30 credit hours at this University beyond those required for that degree. The courses comprising these credit hours must be applicable to the Diploma in Business Administration.
4. The requirement for a specific course(s) may be waived by the Committee on Undergraduate Studies for students who apply for exemption from the course(s) in question. However, such exemptions may not be used to reduce the number of credit hours required for the Diploma.

Note: *Students should also refer to the UNIVERSITY REGULATIONS - General Academic Regulations (Undergraduate) of the University.*

## 9.1 Continuation

1. The Faculty Council of the Faculty of Business Administration constitutes the examining body for all examinations in Business courses. In addition, the standing of every student will be assessed by the Committee on Undergraduate Studies in accordance with the continuation requirements outlined in 2. below.
2. Students must qualify for continuation after each term of study. For continuation, students must have an overall average of 60% over their last ten courses taken. In the event that a student has more courses than needed in the earliest term used, the courses with the highest grades in that term will be used.
3. Students who fail to achieve the standards outlined in 2. above normally will be required to withdraw from the program. They may be considered for readmission after a lapse of two semesters. In order to be considered for readmission, students must formally apply for readmission.
4. Students who are required to withdraw a second time are not eligible for readmission into their program.
5. The Committee on Undergraduate Studies of the Faculty of Business Administration may allow a student to continue who fails to achieve the standards outlined in 2. above. A decision of this nature will be made only for reasons acceptable to the Committee on Undergraduate Studies.

## 10 Regulations for the General Degree of Bachelor of Commerce

### 10.1 Admission

1. Students will be admitted to the Bachelor of Commerce degree program only after the successful completion of the requirements listed in Clauses 1. and 2. of the Regulations for the Diploma in Business Administration. Please refer to the Diploma Regulations which immediately precede these regulations.
2. Graduates of a three-year community college business diploma program may be considered for admission directly into the Bachelor of Commerce degree program. The admission requirements of the Diploma in Business Administration with respect to work experience outlined in clause 1. b. will apply. Applicants should note that admission is competitive and limited and is based on overall academic performance. To be eligible for the General Degree of Bachelor of Commerce such students will be required to complete a minimum of 45 credit hours from diploma and degree courses beyond those used towards their college diploma. Specific course requirements will be determined on an individual basis at the time of admission.
3. Notwithstanding Clause 1. above, the Admissions Committee of the Faculty of Business Administration may admit students who fail to meet the admission requirements. A decision of this nature will be made for reasons acceptable to the Admissions Committee, and in the case of the student thought likely to succeed in future terms.

### 10.2 Curriculum

1. A candidate for the degree of Bachelor of Commerce shall successfully complete a minimum of 60 credit hours in addition to the 60 credit hours required for the Diploma in Business Administration. The 60 credit hours shall comprise:
  - a. The remaining four courses from the following list which were not completed for the Diploma in Business Administration: Business 2000, 2101, 2201, 3320, 3401, 3700, 4320, and 4401;
  - b. Business 5301, Business 7000\*, and Economics 3150;
  - c. Thirty credit hours in Business electives, including non-Business courses prescribed for a concentration;
  - d. Nine credit hours in non-Business electives, at least 6 credit hours of which must be chosen from courses in the faculties of Arts and/or Science and/or the School of Music.

\*Students are encouraged to note the prerequisites for 7000 (Organizational Strategy) and to plan their courses so that they have completed the prerequisites prior to the semester in which they plan to take 7000.

An overall average of at least 60% must be achieved in the twenty courses listed above. A student failing to meet this requirement will be required to repeat a course(s) to raise the overall average to the minimum acceptable level.

2. All candidates, as an academic requirement of the degree, must successfully complete an approved research paper or a comprehensive case analysis with report (Business 750W). This requirement is in addition to the comprehensive case analysis report (Business 450W) required for the Diploma in Business Administration.
3. The requirements for a specific course(s) may be waived by the Committee on Undergraduate Studies for students who apply for exemption from the course(s) in question. However, such exemptions may not be used to reduce the number of credit hours required for the Degree.

Note: *Students should also refer to the UNIVERSITY REGULATIONS - General Academic Regulations (Undergraduate) of the University.*

### 10.3 Continuation

1. The Faculty Council of the Faculty of Business Administration constitutes the examining body for all examinations in Business courses. In addition, the standing of every student will be assessed by the Committee on Undergraduate Studies in accordance with the continuation requirements outlined in 2. below.

2. Students must qualify for continuation after each term of study. For continuation, students must have an overall average of 60% over their last ten courses taken. In the event that a student has more courses than needed in the earliest term used, the courses with the highest grades in that term will be used.
3. Students who fail to achieve the standards outlined in 2. above normally will be required to withdraw from the program. They may be considered for readmission after a lapse of two semesters. In order to be considered for readmission, students must formally apply for readmission.
4. Students who are required to withdraw a second time are not eligible for readmission into their program.
5. The Committee on Undergraduate Studies of the Faculty of Business Administration may allow a student to continue who fails to achieve the standards outlined in 2. above. A decision of this nature will be made only for reasons acceptable to the Committee on Undergraduate Studies.

## 11 Regulations for Honours Degree of Bachelor of Commerce

An Honours Degree of Bachelor of Commerce signifies superior academic achievement.

1. To be considered for an Honours Degree, the candidates must so indicate on the University's prescribed application for graduation form.
2. Candidates for the Honours Degree of Bachelor of Commerce shall
  - a. comply with all regulations governing the Diploma in Business Administration and the General Degree of Bachelor of Commerce, and
  - b. maintain at least a 75% average and an average of at least 3.5 points on the courses which comprise the 84 credit hours in Business (including non-Business option program courses but excluding Business 450W and Business 750W) required for the diploma and the degree, and
  - c. maintain an average of at least 3.25 points on the courses which comprise the total number of credit hours required for the diploma and the degree.
3. Candidates are not permitted to repeat or substitute courses for the purpose of meeting the academic standing specified in Clause 2.
4. A declared candidate for an Honours Degree who fails to fulfil the conditions of Clause 2. but fulfils the requirements for a General Degree shall be awarded the General Degree of Bachelor of Commerce.

## 12 Commerce Concentrations

A student may choose to follow a general degree program, or to concentrate in one of the areas outlined below. In either case, students must complete a minimum of 30 credit hours in Business electives. A concentration provides the student with the opportunity of broadening knowledge and understanding of one of the following areas. Particular attention should be paid to necessary prerequisites when scheduling courses.

### 12.1 Accounting

Students electing an Accounting concentration should complete the following courses:

1. Business 3101, Business 5160, Business 6100, and Business 6110
2. and any five of the following: Business 5000, Business 5500, Business 6120, Business 6130, Business 7110, Business 7120, Business 7150, or Business 7160. Those students intending to pursue the C.A., C.M.A., or C.G.A. designations should consult the appropriate body to determine those courses which would be most beneficial to them.

### 12.2 Marketing

Students electing a Marketing concentration should complete the following courses:

1. Statistics 2501, Business 5200, Business 6200, and Business 7230
2. and any five of the following: Business 6210, Business 6220, Business 6230, Business 7210, Business 7240, or Business 7250

### 12.3 Human Resources and Labour Relations

Students electing the Human Resources and Labour Relations concentration should complete the following courses:

1. Business 6310, Business 6320, Business 7310, Business 7322, Business 7330, and Economics 3360
2. and any two of the following: Business 6301, Business 7320, or Business 7321

### 12.4 Finance

Students electing a Finance concentration should complete the following courses:

1. Business 5500, Business 6120, Business 6510, Business 6550, Business 7500, and Business 7510
2. and any three of the following courses: Mathematics 2090, Economics 3000, Economics 3010, Economics 3030, Economics 4025, Economics 4026, Business 5530, Business 6100, Business 6110, or Business 7150

### 12.5 Small Business/Entrepreneurship

Students electing a Small Business/Entrepreneurship concentration should complete the following courses:

1. Business 5600, Business 6200, Business 6600, Business 6610, Business 7600, Business 7610, and one of Philosophy 2800-2810
2. and any two of the following: Business 6120, Business 7210, or Business 7240

### 12.6 Information Systems

Students electing an Information Systems concentration should complete the following courses:

1. Business 5700, Business 5701, Business 6700, Business 6701, Business 7700, and Business 7701
2. and any three of the following: Business 5401, Business 7400, Computer Science 2710, Computer Science 2711, Computer Science 2752, or Computer Science 3710

## 12.7 Management Science

Students electing a Management Science concentration should complete the following five courses: Business 5401, Business 5402, Business 6400, Business 7400, and Computer Science 2710

## 13 Regulations for the General Degree of Bachelor of Business Administration (BBA)

### 13.1 Admission Modes and Requirements

#### 13.1.1 Direct Entry (for High School Students)

Students may apply for admission into first year of the BBA program (Terms A/B) directly from high school by indicating this in the appropriate place on their Undergraduate Application for Admission/Readmission to Memorial University of Newfoundland. Direct entry from high school is subject to the applicant's final acceptance to the University and admissibility into either Mathematics 1000 or 1090. Terms A/B normally starts in September.

#### 13.1.2 Advanced Standing (for Current Memorial University of Newfoundland Students)

1. Students may apply for admission with Advanced Standing into the BBA program beyond Terms A/B. Students applying for admission beyond Terms A/B must have completed all of the courses required in Terms A/B with grades high enough to have met continuation requirements. Students applying for admission with advanced standing must complete and submit to the Office of the Registrar the Application For Admission to the Faculty of Business Administration, normally on or before the deadlines specified in the University Diary for the semester in which they intend to begin their program.
2. Admission with Advanced Standing is competitive and selective. Prospective students are therefore encouraged to consider an alternate degree program in the event that they are not accepted into the BBA program.
3. The primary criterion used in reaching decisions on applications for admission with advanced standing is overall academic achievement. Selection, therefore, will be based on a student's overall academic performance. Students with weak overall academic records are unlikely to be admitted.
4. In the case where an applicant has been required to withdraw from the Bachelor of Commerce (Co-operative) Program, the Admissions Committee of the Faculty may consider this circumstance as grounds to deny admission.

#### 13.1.3 Transfers From Other Post-Secondary Institutions

1. Students who are transferring from other universities must apply for admission to the University on or before the deadlines specified in the University Diary for the semester in which they intend to begin their program, to allow sufficient time for the evaluation of transfer credits. The acceptance of transfer students into the BBA program is subject to the same conditions outlined under **Advanced Standing (for Current Memorial University of Newfoundland Students)** above.
2. Subject to items 2. and 3. under **Advanced Standing (for Current Memorial University of Newfoundland Students)** above, graduates of a three year community college business diploma program may also be considered for admission with advanced standing into the BBA program. To be eligible for the General Degree of Bachelor of Business Administration such students will be required to complete a minimum of 45 credit hours beyond those used towards their college diploma. Specific course requirements will be determined on an individual basis at the time of admission.

### 13.2 The Curriculum

1. The BBA program requires a total of 120 credit hours.
2. By the end of the Spring semester of their first year, Terms A/B students must have successfully completed the following 30 credit hours:
  - a. Six credit hours in English courses\*;
  - b. Mathematics 1000;
  - c. Economics 2010 and 2020;
  - d. Business 1000;
  - e. Twelve additional credit hours in non-Business courses, at least 9 credit hours of which must be in courses chosen from the Faculties of Arts and/or Science and/ or the School of Music.

\* It is strongly recommended that students complete English 1110, Comprehension, Writing and Prose Style, as one of these English courses.
3. In addition to the Terms A/B requirements, the curriculum shall consist of the successful completion of:
  - a. Sixty credit hours consisting of: Computer Science 2801, Statistics 2500, Economics 3150, Business courses 1101, 1201, 1600, 2000, 2101, 2201, 2301, 2401, 3320, 3401, 3700, 4000, 4320, 4401, 4500, 5301, and 7000.
  - b. Students are encouraged to note the prerequisites for 7000 (Organizational Strategy) and to plan their courses so that they have completed the prerequisites prior to the semester in which they plan to take 7000.
  - c. Thirty other credit hours, of which not more than 9 credit hours may be from courses in the Faculty of Business Administration.
4. For graduation, a student must be enrolled in the BBA program, and have obtained a minimum average of 60% on the program courses.

### 13.3 Minor or Cognate From Another Academic Unit

1. A student enrolled in the BBA program may complete a minor within the Faculty of Arts, the Faculty of Science, the School of Music, or from Sir Wilfred Grenfell College. Regulations for the minor are given under the Calendar entries for the Faculty of Arts, the Faculty of Science, the School of Music, and Sir Wilfred Grenfell College.
2. A student enrolled in the BBA program may pursue a minor (or equivalent) in other non-business academic units (where minor programs exist) with i) permission of that academic unit and ii) permission of the Committee on Undergraduate Studies of the Faculty of Business Administration.



## 13.4 Continuation

1. The Faculty Council of the Faculty of Business Administration constitutes the examining body for all examinations in Business courses. In addition, the standing of every student will be assessed by the Committee on Undergraduate Studies in accordance with the continuation requirements outlined in 2. and 3. below.
2. Students in Terms A/B will be considered for continuation in the BBA program at the end of the Spring semester of their first year. At that time, for continuation after Terms A/B, students must have successfully completed the 30 credit hours prescribed in 2. of **The Curriculum** above, with an overall average on those 30 credit hours of at least 65%. Students who do not satisfy these requirements will be required to withdraw from the program.

Students who have been required to withdraw following Terms A/B may be considered for readmission to the program in accordance with the entry under **Admission Modes and Requirements** above, with the heading **Advanced Standing (for Current Memorial University of Newfoundland Students)**.

A required withdrawal for failure to meet the continuation requirements from Terms A/B will not be reflected on a student's transcript.

3. Following Terms A/B, BBA students must qualify for continuation after each term of study. For continuation, students must have an overall average of 60% over their last ten courses taken. In the event that a student has more courses than needed in the earliest term used, the courses with the highest grades in that term will be used.

Students who fail to achieve these standards will be required to withdraw from the program. They may be considered for readmission after a lapse of two semesters. In order to be considered for readmission, students must formally apply for readmission.

A required withdrawal for failure to meet continuation requirements in terms following Terms A/B will be reflected on a student's transcript.

4. Students beyond Terms A/B who are required to withdraw a second time are not eligible for readmission into their program.
5. The Committee on Undergraduate Studies of the Faculty of Business Administration may allow a student to continue who fails to achieve the standards outlined in 3. above. A decision of this nature will be made only for reasons acceptable to the Committee on Undergraduate Studies.

## 14 Regulations for the Honours Degree of Bachelor of Business Administration

An Honours degree of Bachelor of Business Administration signifies superior academic achievement.

1. To be considered for an Honours degree, the candidates must so indicate on the University's official "Application for Degree" form.
2. Candidates for the Honours Degree of Bachelor of Business Administration shall:
  - a. comply with all regulations governing the General Degree of Bachelor of Business Administration, and
  - b. achieve at least a 75% numerical average and a grade point average of 3.5.
3. Candidates are not permitted to repeat or substitute courses for the purpose of meeting the academic standing specified in Clause 2.
4. A declared candidate for an Honours degree who fails to fulfil the conditions of Clause 2. but fulfils the requirements for a General degree shall be awarded the General Degree of Bachelor of Business Administration.

## 15 Regulations for the General Degree of International Bachelor of Business Administration (iBBA)

### 15.1 General Regulations

1. The iBBA program requires a total of 120 credit hours.
2. The program includes a compulsory one-semester approved program of full-time study at an overseas location. Students must normally have completed at least 72 credit hours of the program and no more than 96 credit hours of the program prior to commencement of the study abroad program.
3. The overall program must have a coherent global and regional content. In order to achieve this coherency students shall nominate a global region (e.g. Asia, Europe, Latin America) as a focus area within their program. The choice of region will affect both the choice of non-business courses and the choice of location and content of the study abroad program (see **Global and Regional Content** below).

### 15.2 Admission Requirements

1. Normally, admission is offered for the Fall Term. The deadline for admission (or readmission) is March 1. Students applying for admission to the iBBA must submit the Application For Admission to the Faculty of Business Administration to the Office of the Registrar on or before this deadline. Where circumstances permit, applications will be considered for the Winter and Spring Terms. The deadlines for admission (or readmission) are October 1 for Winter, and February 1 for Spring.
2. Students who are seeking admission for the Fall Semester normally must have completed all the courses required for admission by the end of the Winter Semester.
3. Applications received after the deadline will be considered only if a space is available in the program.
4. Eligibility: To be eligible for Admission to the iBBA program an applicant must have successfully completed the Pre-iBBA program (see Curriculum, clause 1, below) with an average on those courses of at least 65% or better, or the equivalent at another recognized post-secondary institution. Students who are transferring from other universities must apply for admission to the University on or before the deadlines specified in the University Diary for the semester in which they intend to begin their program, to allow sufficient time for the evaluation of transfer credits.
5. Admission is competitive and selective. Therefore, prospective students are encouraged to consider an alternate degree program in the event that they are not accepted into the International Bachelor of Business Administration program.
6. The primary criterion used in reaching decisions on applications for admission is overall academic achievement. Selection, therefore will be based on a student's overall academic performance in addition to the average on the thirty credit hours required for admission. Students with weak overall academic records are unlikely to be admitted.
7. In the case where an applicant has been required to withdraw from one of the Faculty's other Undergraduate programs, the Admissions Committee of the Faculty may consider this circumstance as grounds to deny admission.

### 15.3 The Curriculum

1. The iBBA program includes the following thirty credit hours that comprise the Pre-iBBA program:
  - a. Six credit hours in English courses\*;
  - b. Mathematics 1000;
  - c. Economics 2010 and 2020;
  - d. Business 1000;
  - e. Political Science 2200;
  - f. Nine additional credit hours in non-Business courses, at least 6 credit hours of which must be in courses chosen from the Faculties of Arts and/or Science and/ or the School of Music\*\*.

\* It is strongly recommended that students complete English 1110 as one of these English courses.  
 \*\* It is also strongly recommended that students take into account the **Global and Regional Content** requirement outlined below when choosing these additional 9 credit hours of study.
2. In addition to the Pre-iBBA program requirements, the curriculum shall consist of the successful completion of:
  - a. Thirty nine credit hours consisting of: Statistics 2500 and Business courses 1101, 1201, 2000, 2101, 2301, 2401, 3401, 3701, 4000, 4320, 4500, and 7000.
  - b. Fifteen credit hours of international business related courses, which must include:
    - Economics 3030
    - Business 7302
    - and any three from:
      - Business 6311
      - Business 7240
      - Business 6012
      - Business 6550
      - Business 6040
      - Economics 4030\*
      - Political Science 3250

Any other approved course with an international focus.  
 \*Students need to satisfy the pre-requisites for Economics 4030 specified in the University Calendar.
  - c. Twelve further credit hours in non-business courses. Students should take into account Clause 1., Non-business elective courses, under **Global and Regional Content** requirement below when choosing these additional twelve credit hours of study.
  - d. Twelve credits hours in an approved study abroad program. The program must meet Clause 2., **Location and content of study abroad program**, under the **Global and Regional Content** requirements below.
  - e. The remaining 12 credit hours are electives. It is recommended that students choose their elective courses so that their overall program contains at least one group of four or five courses within a chosen functional area or specialization or minor.
3. For graduation, a student must be enrolled in the iBBA program, and have completed the 120 credit hours required with a minimum average of 65% on the program courses.

### 15.4 Global and Regional Content

Courses chosen to meet the above requirements must have a coherent global and regional content. In order to achieve this coherency, students shall nominate a global region (e.g. Asia, Europe, Latin America) as a focus area within their program. The choice of region will affect the choice of non-business elective courses as well as the choice of location and content of the study abroad program.

#### 1. Non-business elective courses

- a. Non-business elective courses must include the following nine non-language credit hours:
  - i. At least 3 further credit hours with a global and/or comparative international perspective
  - ii. At least 6 credit hours with a chosen regional perspective

In the **Selected Arts Courses With Global, Comparative International or Regional Content** table below an illustrative list has been provided, indicating a range of courses available at Memorial University of Newfoundland that offer a global or regional perspective. The latter may include languages, regional studies and other cross-cultural courses as well as approved courses in Economics.

- b. Study of a foreign language relevant to the chosen region, commencing in the Pre-iBBA program, is highly recommended. Students selecting a regional perspective and planning to undertake their study abroad program where English is not the main language must complete 6 credit hours of the relevant language prior to undertaking study abroad.

#### 2. Location and content of study abroad program

- a. The approved study abroad program must be taken at a location consistent with the chosen region of focus. This will usually be at one of Memorial University of Newfoundland's exchange partner universities but may involve participation in Memorial University of Newfoundland 's Harlow Program, or similar. Students are encouraged to carry a full 15 credit hour load while abroad but must follow a program of at least 12 credit hours or equivalent.
- b. To ensure that students obtain regional perspectives and skills not available at Memorial University of Newfoundland an approved program must include:
  - i. at foreign language locations, at least three credit hours of study of a regional language.
  - ii. at all locations, at least six credit hours with a specific regional content
  - iii. at locations in Britain, Ireland, the US, Australia and New Zealand, at least 9 credit hours with a specific regional content.

For the study abroad program, courses regarded as having specific regional content would include languages, regional studies and other cross-cultural courses as well as approved courses in Economics and Business.

- c. Subject to these requirements there is no additional restriction as to the proportion of business or non-business courses studied abroad. For example, an approved study abroad program may contain courses entirely of an 'Arts' nature. It is also possible to select courses that have no exact equivalent at Memorial University of Newfoundland and must be counted as unspecified credit.

Courses studied abroad may be approved as counting toward any of the Curriculum course requirements listed above, but no

course may count towards meeting two such requirements.

## 15.5 Minor from Faculty of Arts

A student enrolled in the iBBA program may both meet the requirements of the degree and be able to complete a minor within the Faculty of Arts. Regulations for the minor are given under the Calendar entries for the Faculty of Arts.

## 15.6 Continuation

- The Faculty Council of the Faculty of Business Administration constitutes the examining body for all examinations in Business courses. In addition, the standing of every student will be assessed by the Committee on Undergraduate Studies in accordance with the continuation requirements outlined in 2. and 3. below.
- Following entry to the program, iBBA students must qualify for continuation after each term of study. For continuation, students must have an overall average of 65% over their last ten courses taken. In the event that a student has more courses than needed in the earliest term used, the courses with the highest grades in that term will be used.  
Students who fail to achieve these standards will be required to withdraw from the program. They may be considered for readmission after a lapse of two semesters. In order to be considered for readmission, students must formally apply for readmission.  
A required withdrawal for failure to meet continuation requirements in the iBBA program will be reflected on a student's transcript.
- Students who are required to withdraw from the program a second time are not eligible for readmission into their program.
- The Committee on Undergraduate Studies of the Faculty of Business Administration may allow a student to continue who fails to achieve the standards outlined in 2. above. A decision of this nature will be made only for reasons acceptable to the Committee on Undergraduate Studies.

## 16 Regulations for the Honours Degree of International Bachelor of Business Administration

An Honours degree of Bachelor of International Business Administration signifies superior academic achievement.

- To be considered for an Honours degree, the candidates must so indicate on the University's official "Application for Degree" form.
- Candidates for the Honours Degree of International Bachelor of Business Administration shall:
  - comply with all regulations governing the General Degree of International Bachelor of Business Administration, and
  - achieve at least a 75% numerical average and a grade point average of 3.5 on the 120 credit hours completed for the degree.
- Candidates are not permitted to repeat or substitute courses for the purpose of meeting the academic standing specified in Clause 2.
- A declared candidate for an Honours degree who fails to fulfil the conditions of Clause 2 but fulfils the requirements for a General degree shall be awarded the General Degree of International Bachelor of Business Administration.

## 17 Global, Comparative International or Regional Content Courses

Selected Arts Courses with Global Comparative International or Regional Content Table

<b>Social and Cultural Anthropology</b> 2413, 3082	<b>Harlow and Other Study Abroad Programs</b> Arts courses at Harlow and at other approved exchange partners in Europe, the Asia-Pacific and Latin America
<b>Economics</b> 3000, 3001, 3010, 3011, 3030, 3150, 4030, 4031	<b>History</b> 1012, 2031, 2350, 2500, 2501, 3380, 3540, 3570
<b>French/Spanish/Italian</b> <b>French</b> Language courses 2900 <b>Spanish</b> Language courses 3400, 3401 <b>Italian</b> Languages courses (6 credits only)	<b>Linguistics</b> Japanese Language courses (12 credits only)
<b>Geography</b> 2302, 2460	<b>Political Science</b> 1000, 1020, 2200, 2300, 3200, 3210, 3220, 3250, 3291, 3330, 3430, 4210-4219, 4230
<b>German/Russian</b> <b>German</b> Language courses 2900, 2901 <b>Russian</b> Language courses	<b>Religious Studies</b> 1040-41 (6 credits only), 1032, 2340, 2400, 2410, 2420, 2425, 2430, 2801

Note: The normal prerequisites will apply to all the courses listed above.

## 18 Course List

In accordance with Senate's *Policy Regarding Inactive Courses*, course descriptions for courses which have not been offered in the previous three academic years and which are not scheduled to be offered in the current academic year have been removed from the following listing. For information about any of these inactive courses, please contact the Dean of the Faculty.

### 18.1 Service Courses

Note: Courses listed as Service Courses may not be used to fulfil any of the requirements of any of the programs of the Faculty of Business Administration, including the minor, certificate, diploma and degrees.

**2102 Introductory Accounting for Non-Business Students** provides full introductory coverage of both financial and managerial accounting. The course focuses on the most widely used accounting theory and practice.

Note: Credit may not be obtained for Business 2102 and either of Business 1101 or Business 2101.

### 18.2 Core Program Course Descriptions

Notes: 1. Any prerequisite listed may be waived by permission of the instructor.

2. Enrolment in Business courses is limited and first priority will be given to students registered in the Faculty of Business Administration programs and secondarily to Business Minor Candidates who have obtained the approval of the Dean of the Faculty of Business Administration or delegate.

**1000 Introduction to Business** is an overview of business in the Canadian environment is presented in the course with emphasis on the stakeholders involved and the issues confronting managers. The course examines the functional areas of the enterprise (finance, marketing, production, and human resources management) in addition to providing an overview of the business system. An analysis of actual business situations provides a framework of study.

Note: *This course was formerly Business 2001. Credit may not be obtained for both Business 2001 and Business 1000.*

**1101 Principles of Accounting** emphasize the concepts and issues of introductory financial accounting as they relate to the Canadian conceptual framework, and will also address the strengths and weaknesses of financial reporting at an introductory level. The student will be introduced to the accounting process and analysis of the balance sheet, income statement, and the statement of changes in financial position.

Note: *Credit may not be obtained for Business 1101 and either of the former Business 3100 and the former Business 2100.*

**1201 Principles of Marketing** provides an overview of the marketing function, emphasizing customer satisfaction as the focal point of an organization's activities. The course examines customer characteristics and behaviours as a crucial element in the design of effective marketing strategies and programs. The course also deals in detail with the elements of the marketing mix: products and services; pricing; distribution channels; and promotion.

Prerequisite: Business 1000 or the former Business 2001.

Note: *Credit may not be obtained for both Business 1201 and the former Business 3200.*

**1600 Introduction to Entrepreneurship** is an introductory course designed to give students a broad understanding of the field of entrepreneurship and the role that entrepreneurship plays in society. Topics will include the nature and theories of entrepreneurship, the characteristics and behaviours of entrepreneurs, and the entrepreneurial process in small and large firms. Students will get to think and act in a creative manner, obtain exposure to local entrepreneurs, assess their potential for entrepreneurial careers and develop attitudes and skills that will be useful in any organization. The course is also useful for those who will be dealing with smaller firms in the context of larger organizations and for those who will be working for entrepreneurs.

Prerequisite: Business 1000.

**2000 Business Communications** focuses on the development of written and oral communication skills critical in the workplace. The common communications media are reviewed with emphasis on electronic and written correspondence. Students learn how to prepare comprehensive analytical reports including proposal writing. Attention is also given to building confidence in delivering oral presentations and preparing appropriate employment packages. A highly interactive design encourages student practice and participation.

**2101 Managerial Accounting** provides an overview of the use of financial data for managerial decision making. The student will be introduced to basic budgeting and analysis techniques for both service-oriented and manufacturing businesses.

Prerequisite: Business 1101.

Note: *Credit may not be obtained for both Business 2101 and the former Business 4100.*

**2201 Marketing Applications** applies the principles learned in Business 1201 in a variety of contexts and organizations. Students gain an appreciation for the application of marketing principles in specialist application areas such as: marketing for services, not-for-profit and public sector organizations, and in an international context. In addition, an overview and appraisal of the marketing function and of marketing performance is addressed through the marketing planning process.

Prerequisite: Business 1201.

Note: *Credit may not be obtained for both Business 2201 and the former Business 3200.*

**2301 Organizational Behaviour** focuses on the study of individual and group processes in formal organizations. The student is introduced to the nature of work, the systematic approach to the study of behaviour, organizational roles and socialization, motivation, leadership, communication, and group dynamics.

Note: *This course was formerly Business 4300. Credit may not be obtained for both Business 2301 and Business 4300.*

**2401 Quantitative Methods for Business** includes series, probability, linear algebra with applications, graphing (including two-variable linear optimization), and business applications of differential calculus; where applicable, spreadsheets will be used.

Prerequisite: Mathematics 1000 or 1081

Note: *A knowledge of the basic operations of spreadsheets is required.*

**3320 Introduction to Labour Relations** provides an introduction to the field of industrial and labour relations in Canada, with primary emphasis on the labour-management relationship. Students will be introduced to the basic elements of an industrial relations system, including the participants, their roles and relationships, the social, economic, legal and political environment in which the participants interact, and the process and outcomes of collective bargaining. Students may be exposed to various role playing exercises that are applicable to a career in industrial and labour relations.

**3401 Operations Management** presents and discusses the fundamental

concepts necessary to understand the nature and management of the operations function in organizations. The course will focus on forecasting for operations, inventory management; capacity, aggregate and requirements planning; operations scheduling; quality management and continuous improvement; just-in-time systems; product and service design. Case studies will be used.

Prerequisites: Statistics 2500 and Business 2401.

Note: *Credit may not be obtained for both Business 3401 and Business 5400.*

**3700 Information Systems** provides an introduction to information systems to support operations and management. Topics include: an overview of information systems technology; data management; systems development approaches; and managing the information systems function.

Prerequisites: Computer Science 2801 (or equivalent computer literacy course) and Term 3 standing.

Notes: 1. *Credit may not be obtained for both Business 3700 and Business 6300.*

2. *Credit may not be obtained for both Business 3700 and Business 3701.*

**3701 Introduction to Global Information Systems** introduces the basics of information systems, including its organizational and technical foundations, and the process and techniques for modeling business processes and implementing them in modern software and hardware. Particularly, this course will discuss how information systems can support the various international business strategies, the issues that managers should address while developing international information systems, and the technical alternatives available for developing global information systems. The course will equip students with a solid knowledge and understanding of information systems that currently prevail in global/international business operations.

Prerequisite: Enrolment in the iBBA Program.

Note: *Credit may not be obtained for both Business 3701 and Business 3700.*

**399W Work Term I** (see description in Work Term Descriptions and course title section below.)

**4000 Business Law I** is a course dealing with the law relating to certain aspects of business activity; includes introductory material on the nature of law and legal processes, together with a detailed study of certain aspects of the law of contract, examination of the general principles of the law of agency as they affect business operations; introduction to selected topics in company and partnership law.

Note: *This course was formerly Business 3000. Credit may not be obtained for both Business 4000 and Business 3000.*

**4320 Human Resource Management** introduces the student to the design, operation and management of P/HRM processes, their evaluation, and their contribution to employee and organization effectiveness. The principal processes considered are staffing, development, employment relations, and compensation. Consideration of the influence of relevant organizational and external conditions on P/HRM is included. The course views the management of human resources as the joint responsibility of line and P/HRM managers.

Prerequisite: Business 2301.

**4401 Management Science** is an introduction to the analysis, structuring, and model formulation of quantitative business problems, and to the methods for solving these models. Topics include the management science paradigm, payoff matrices, sensitivity analysis of solutions, decision trees, imperfect information, utility theory, Markov chains, formulation of simple linear optimization models, and other topics at the discretion of the instructor; where applicable, available software will be used.

Prerequisite: Business 2401.

Note: *Credit may not be obtained for both Business 4401 and the former Business 3400.*

**4500 Financial Management I** is designed to introduce the student to the role of financial management in business, financial analysis techniques, working capital management, and long-term and short-term financing.

Prerequisites: Business 1101, Statistics 2500, and Economics 2010.

Note: *Credit may not be obtained for both Business 4500 and the former Business 4110.*

**450W Business Methods in Practice I** (see description in Comprehensive Case Analysis Descriptions and course title section below.)

**499W Work Term 2** (see description in Work Term Descriptions and course title section below.)

**5301 Organizational Theory** focuses on the organization, its environment, and its subsystems. From providing a basic appreciation of the role and practice of research in organizations, study extends to measures of organizational effectiveness, determinants of structure and design, power and politics, intergroup conflicts and conflict resolution, and organizational development and change.

Prerequisite: Business 2301.

Note: *This course was formerly Business 5300. Credit may not be obtained for both Business 5301 and Business 5300.*

**599W Work Term 3** (see description in Work Term Descriptions and course title section below.)

**7000 Organizational Strategy** emphasises the concepts of business and organizational strategy, and the formulation and implementation of strategy.

These will be discussed from a senior management perspective and as the result of senior management decision-making. The student is expected to develop a facility in the strategic analysis of business and other types of organizations, and in strategy formulation and implementation. Theoretical concepts will be discussed and will be explored through case analysis. Prerequisite: Business 2101, 2201, 3320, 3401, 3700, 4000, 4320, 4500, and 5301.

**750W Business Methods in Practice II** (see description in Comprehensive Case Analysis Descriptions and course title section below).

## 18.3 Business Electives

**3101 Accounting Applications** continues the study of accounting on a more in-depth and detailed basis. Building on the theory and concepts of Business 1101 and Business 2101, Business 3101 will emphasize the procedures and techniques required for the preparation and presentation of accounting information and general purposes financial statements. Prerequisite: Business 1101.

Note: *Credit may not be obtained for both Business 3101 and either the former Business 3100 or the former Business 2100.*

**5000 Business Law II** is designed to show the student how principles of Law are applied to four areas of Business. The areas dealt with in this course are accounting/finance, marketing, personnel and production. Prerequisite: Business 4000.

**5160 Cost Accounting** deals with the use of accounting data for decision making. Topics covered include: cost estimation, pricing, joint costs, advanced variance analysis, total quality management, just-in-time, decentralization, transfer pricing, performance evaluations, activity based accounting, and backflush costing. Prerequisite: EITHER the former Business 3100 and Business 4100, OR Business 2101.

Note: *This course was formerly Business 7100. Credit may not be obtained for both Business 7100 and Business 5160.*

**5200 Consumer Behaviour** deals with concepts related to factors which influence the purchase and consumption behaviour of individuals including culture, social class, reference groups, perception, learning, motivation, personality and lifestyle. The unique aspects of groups and organizational buyers will also be examined. Prerequisite: Business 2201 or the former Business 3200.

**5401 Linear Optimization and Extensions I: Applications** is an extension of Business 4401 to more complex linear optimization models, and models which are extensions of this of the ideas of formulation. Emphasis will be on formulation and computer-based sensitivity analysis, applications to other fields of business, cases in linear optimization and related fields. Prerequisite: Business 4401.

Note: *Credit may not be obtained for both Business 5401 and the former Business 4400.*

**5402 Linear Optimization and Extensions II: Algorithms** include the simplex and revised simplex algorithms, sensitivity analysis and duality, goal optimization, advanced formulation of 0/1 models, branch and bound algorithm, network models: assignment, transportation, transshipment, shortest path, critical path, minimal spanning tree, and maximal flow. Prerequisite: Business 4401.

Note: *Credit may not be obtained for both Business 5402 and the former Business 4400.*

**5500 Financial Management II** is an extension of Business 4500. Capital investment decision-making using discounted cash flow methodology; investments under certainty; financial structure and leverage; analysis of money and capital markets; further examination of long-term external financing. Prerequisite: Either the former Business 4110 or Business 4500.

Note: *This course was formerly Business 7140 and Business 5140. Credit may be obtained for only one of Business 5500, the former Business 7140, and the former Business 5140.*

**5530 Public Finance** recognizes the large role played by government in our society. Sources and uses of government funds at the federal, provincial and local levels will be covered. Intergovernmental fiscal problems will be examined with special emphasis on various incentive programs available to business from the three levels of government. Prerequisites: Economics 2010 and 2020.

Note: *This course was formerly Business 5100. Credit may not be obtained for both Business 5530 and Business 5100.*

**5600 New Venture Creation** covers the business creation process from the idea conception stage to the launch stage. Students learn how to search for, screen and evaluate opportunities, and to plan and assemble the required resources, including the preparation of an actual business plan. Alternatives to new venture creation, such as purchasing an existing business and purchasing a franchise, are also explored. Extensive group work is required. Prerequisites: Business 1101, Business 1600, and Business 2201.

Note: *This course was formerly Business 5030 and Business 7030. Credit may be obtained for only one of Business 5600, the former Business 7030 and the former Business 5030.*

**5700 Information Systems Analysis and Design** provides students with the skills to identify business problems which may be solved using information technology, determine requirements for information systems (IS)

solutions, and develop detailed designs which form the basis for implementing systems. Topics may include: role of the user in systems development, systems development life cycle, requirements analysis and conceptual modelling, structured analysis and design, and trends in systems development methodologies. The importance of CASE tools in modern systems development will be emphasized through hands-on exercises. Prerequisite: Business 3700.

**5701 Information Systems Development** focuses on issues related to the implementation of information systems. Particular attention will be paid to the requirements of transaction processing and management reporting systems. Topics may include: transition from design to implementation, software construction, testing, documentation, training, conversion, and evaluation.

Prerequisites: Business 3700 and Computer Science 2710.

### 6000-6029 (Excluding 6001, 6008, 6009, 6010 and 6022) Special Topics

**6010 Strategic Management of Technology and Innovation** is designed to explore the strategic management of technology and innovation for improving competitiveness and for business development. This will include market-strategy-technology connections, and technical innovation/new product development processes. Technology and technical innovation are viewed as fundamental to strategic competitiveness and business development as important elements of the management of strategic change in the business firm. In approaching technical innovation as strategic implementation, business environmental, organizational capability, human resources and management factors will be discussed. Prerequisite: Business 2101, 2201, 3320, 3401, 3700, 4320, 4500, and 5301.

**6040 International Business Law** develops the skills a business student must have in understanding the laws and regulations that exist and relate to international business decision making. The course will equip students with a knowledge and understanding of laws and regulations that currently prevail in international business operations. Prerequisite: Business 4000, Business Law I.

**6100 Intermediate Accounting I** continues the study of financial accounting by focusing on specific topics such as current assets, long-term investments, capital assets, intangibles, current liabilities, and long-term liabilities. Emerging issues in accounting will also be covered. Prerequisite: Either the former Business 3100 or Business 3101.

**6110 Intermediate Accounting II** is designed to integrate the principles, concepts and skills acquired in previous accounting courses and to enhance the student's analytical and decision-making capabilities. The course will focus on specific topics related to deferred taxes, pension liabilities, shareholders' equity, and financial statement presentation. The skills acquired in earlier courses will be integrated for purposes of interpreting and analyzing financial information. Prerequisite: Either the former Business 3100 or Business 3101.

**6120 Taxation I** is a determination of income tax liability of individuals and corporations, and a survey of sales taxes.

Prerequisite: Business 1101 or the former Business 3100, and Business 4000.

**6130 Auditing** introduces the student to the practice of auditing and to stress the auditor's decision-making process when determining the nature and amount of evidence the auditor should accumulate. Specific topics to be covered include the auditor's legal liability, materiality, internal control, transaction cycles, and audit of information processed through electronic data processing systems.

Prerequisite: Either Business 6100 or Business 6110.

**6200 Marketing Research** is designed to acquaint the student with the use of marketing research as an aid to management. This is a comprehensive survey of the scope and methods of marketing research.

Prerequisites: Business 2201 or the former Business 3200, and Statistics 2501 or equivalent.

**6210 Advertising Management** provide a theoretical background on the nature, role and principles of advertising; and to develop analytical and decision-making skills in planning, executing, evaluating and controlling advertising campaigns. Areas to be examined include: social, ethical, legal, and economic considerations; market and customer analysis; advertising objectives; advertising budgets; creative strategy; media strategy; sales promotion and advertising; campaign management and retail advertising. Prerequisite: Business 2201 or the former Business 3200.

**6220 Professional Selling and Sales Management** focuses on professional selling skills and the selling process, as it is important to understand them to manage a sales force effectively. The sales management component will focus on sales forecasting; planning and budgeting; sales force organization; recruiting, selecting, training, motivating, and compensating salespeople; and evaluating and controlling the sales force and individual salespeople. Prerequisite: Business 2201 or the former Business 3200.

**6230 Services Marketing** is intended to examine the marketing of services and the role of services in supporting the marketing of tangible products. The distinction between the marketing of tangibles and intangibles will be stressed. The course will identify and examine the distinct issues which are encountered in the marketing of services and will explore appropriate strategies for implementing services marketing programs, primarily in

services organizations, including health care, transportation, telecommunications, education, etc. Specifically, the course will examine in detail the role of people in delivering services, the importance of service quality as a strategic differentiating tool, and the importance of collaboration between marketing and human resources management in the delivery of services.

Prerequisite: Business 2201 or the former Business 3200.

**6301 New Directions in Organizational Behaviour** provides an opportunity for students to explore and to develop their interests in topics in a dynamic field. Topics will be selected according to current emphases in the organizational behaviour literature.

Prerequisites: Business 2301 and Business 5301.

**6310 Advanced Personnel and Human Resource Management** reinforces the applied aspects of theory covered in Business 4320) by examining approaches to (a) the avoidance of lawsuits, arbitration and performance-related problems which could result from the lack of both due process and effective policies and procedures, and (b) processes for the management of contemporary issues in Human Resource Management. Topics include problem solving in the areas of promotion policy, performance appraisal, test validation, training and development, compensation, job evaluation and pay equity, wrongful dismissal, occupational health and safety, absenteeism, substance abuse and AIDS. Students will examine cases and other material involving worker-management conflict in the above areas and seek to relate these to the legal, ethical and behavioural foundations of Human Resource Management in both unionized and non-unionized settings.

Prerequisites: Business 4320.

**6311 International Human Resources Management** develops the skills a business student must have in understanding the processes and practices of international human resource management (IHRM) for a successful managerial career. The course will equip students with a solid knowledge and understanding of human resource functions and practices that currently prevail in global/international business operations.

Prerequisites: Business 4320, Human Resource Management.

**6312 Employee Recruitment and Selection** is a critical factor in creating high performance work systems. This course examines the role of selection in HRM, legal issues, measurement, selection criteria, job competencies, testing, and interviewing, and making the employment decision.

Prerequisite: Business 4320.

Note: *This course was formerly Business 6022. Credit may not be obtained for both Business 6312 and the former Business 6022.*

**6320 Advanced Labour Relations** provides advanced level treatment of the field of industrial and labour relations in Canada, with primary emphasis on the labour-management relationship. Emphasis is placed on understanding recent problems/issues in industrial and labour relations and the range of options available for resolving these same problems. Topics examined may include: industrial relations theory; labour law reform; union growth and structure; management strategy; the role of third parties; workplace innovations; alternative dispute resolution mechanisms; union impact; public sector labour relations; comparative industrial relations; etc. Students may be exposed to various role playing exercises that are applicable to a career in industrial and labour relations.

Prerequisite: Business 3320.

**6400 Advanced Management Science** - inactive course.

**6510 Investments** is a study of investment securities, risks, markets and mechanics; an appraisal of the economy, the industry and the firm; and portfolio management for personal and institutional investments.

Prerequisite: Either the former Business 4110 or Business 4500

Note: *This course was formerly Business 6140. Credit may not be obtained for both Business 6510 and Business 6140.*

**6550 International Finance** examines the additional risks and profitable opportunities that arise for the firm when it extends its operations into international markets. Specific topics will include the determination of exchange rates, the international monetary system, balance of payments, the foreign exchange market, international money and capital markets, the parity conditions, accounting exposure, economic exposure, transactions exposure, political risk, and global financing. Knowledge of these topic areas will give further understanding with respect to operating within the constraints of the international marketplace.

Prerequisite: Either the former Business 4110 or Business 4500.

Note: *This course has been offered as the special topics course Business 6008. Consequently, credit may not be obtained for both Business 6008 and Business 6500.*

**6600 Managing Growth in the Small Firm** is designed to introduce the student to the challenges and opportunities of managing small growing businesses. The focus will be on functional issues and solutions within the context of growth oriented small firms. In addition, the course will explore strategic planning in the owner-managed business and strategies for growth and expansion. Extensive use will be made of cases and examples from Atlantic Canada.

Prerequisite: Business 5600.

Note: *This course was formerly Business 6030. Credit may not be obtained for both Business 6600 and Business 6030.*

**6610 Small Enterprise and Regional Development** explores the potential and constraints on efforts to foster small enterprise formation and expansion as a means to promote regional economic development. It critically

examines government initiatives to promote small business as the panacea for depressed regional economies, and reviews changes in the global economy and the organization of production which may enhance small business competitiveness. Both Canadian and international cases are studied, with theoretical and empirical findings related to the Newfoundland context.

Note: *This course was formerly Business 7031 and Business 6009. Credit may be obtained for only one of Business 6610, the former Business 6009 and the former Business 7031.*

**6700 Data Management** is based on the premise that data is a valuable resource which needs to be managed effectively to provide accurate, complete, timely, relevant, and accessible information to support decision making. Topics may include: enterprise data modelling, logical database design, database management systems, query languages, transaction management and concurrent access, and security.

Prerequisite: Business 3700 or Business 6300.

**6701 Information Technology Management** examines issues of managing information systems and technology. Topics may include: success and failure in IS implementation, IS planning, economics of IS, telecommunications and network management, and legal and ethical issues.

Prerequisite: Business 3700 or Business 6300.

**7010 Business and Society** examines the inter-relationships among business, government, society and the environment. Topics include: the social-economic business system, business ideologies, social responsibilities of business, business ethics, stakeholder and issues management, and selected current issues in business.

Prerequisite: Term 7 standing.

**7110 Accounting Theory** deals with the theoretical issues of specific topics such as the accounting standard setting process, the Canadian conceptual framework, assets, liabilities, revenues, expenses, not-for-profit organizations, related party transactions, and financial statement presentation and disclosure. Considerable emphasis will be given to emerging issues.

Prerequisites: Business 6100, Business 6110, Business 6120, and Business 6130.

**7120 Advanced Financial Accounting** covers specific topics such as long-term investments, consolidated financial statements, joint ventures, segmented financial information, foreign exchange transactions, and fund accounting.

Prerequisite: Business 6100 and Business 6110.

**7150 Taxation II** is designed to provide a detailed and comprehensive analysis of income taxation as well as sales taxation and customs duties and excise taxes. Information relating to the use of trusts, partnerships, and joint ventures will be included, as well as the use of various tax shelters and international tax implications in business planning. The concentration will be on how tax planning for both individuals and corporations can be a significant element in the regular decision-making process, especially for the private corporation.

Prerequisite: Business 6120.

**7160 Advanced Topics in Managerial Accounting** introduces the student to an in-depth study of advanced qualitative and quantitative methodology available to the managerial accountant. The application of mathematical models and behavioural theories to realistic challenges faced by various fiscal entities will be stressed. Class instruction will include the use of cases and rely heavily on a multidisciplinary approach towards solving the unstructured problem.

Prerequisite: Business 5160.

**7210 Retailing Management** provides an integrative examination of the activities involved in marketing goods and services directly to the ultimate consumer. Specifically, the following areas will be examined within a managerial framework: the evolution of retailing; retailing within the marketing channel; market analysis and planning; shopping behaviour; image and retail advertising; trading area and site analysis; store layout; shelf space utilization; merchandising; and the future prospects for retailing.

Prerequisite: Business 2201 or the former Business 3200.

**7230 Marketing Management** is designed to integrate the principles, concepts and skills acquired in previous marketing courses and to enhance the student's analytical and decision-making capabilities with regard to developing marketing strategies. The course will focus on: market analysis, marketing planning, the strategic decisions to be made within the framework of the marketing mix (product, price, promotion, and distribution); and the control systems related to the marketing program. The use of market research and knowledge from other functional areas of the organization (accounting, finance, economics, etc.) will be considered throughout the course.

Prerequisites: Business 5200 and Business 6200.

**7240 International Marketing** provides an understanding of the effects that the international dimension has upon the strategies and management of the marketing efforts of the firm. In particular, the student is introduced to the analysis techniques of the various environments that constitute a country analysis. Entry strategies are discussed with an emphasis upon the export process. Finally, the standardization/adaptation question is discussed in the context of each element of the marketing mix.

Prerequisite: Business 2201 or the former Business 3200.

Note: *Credit may not be obtained for both Business 7240 and the former Business 6001.*

**7250 Business and Industrial Marketing** presents a comprehensive view of business markets, including industrial, institutional, and government markets. There is a balanced focus on strategy development and implementation. Particular attention is given to organizational buying behaviour, relationship management, global competitiveness, and the marketing of new high technology products and services.

Prerequisite: Business 2201 or the former Business 3200.

Note: *Credit may not be obtained for both Business 7250 and the former Business 7220.*

**7302 International Business** is designed to introduce students to the issues of international business: these are the processes of cultural confrontation and compromise; the problems of competitive sovereignty involving multinational corporations and the governments of host societies; the organization, structure, operation and control of diverse international businesses; and, finally, the role of multinational enterprise as a catalyst in economic development and resource employment, in particular, the North-South context. The relevance of international business as an area of study to the Canadian economy is discussed. The course is both conceptual and empirical in content.

**7310 Seminar in Human Resource Management** seeks to integrate policies, procedures and methods covered in B6310 with other functional areas which impact upon the management of Human Resource Systems. Stakeholder assumptions about: work-force characteristics; management philosophy; business strategy; labour markets; laws and society; task technology and unions will be examined via a combination of cases, readings, research, peer discussion and dialogue with guest speakers.

Prerequisite: Business 6310.

**7320 Collective Agreement Administration and Arbitration** provides advanced coverage of the substantive and procedural rights of employers, unions and employees under collective agreements, and the means by which disputes over these rights are resolved through the grievance arbitration process. Topics examined include: the legal framework and place of grievance arbitration in the industrial relations system; the nature and scope of the arbitrator's role; preparation for and conduct of arbitration hearings; arbitral jurisprudence; alternative dispute resolution processes; and the development of a sound labour relations climate. Students will undertake extensive reviews of labour arbitration cases and will examine the impact of jurisprudence on the philosophy and practice of management in the private and public sectors. Students may be exposed to various role playing exercises that are applicable to a career in industrial and labour relations.

Prerequisite: Business 6320.

**7321 Dispute Settlement in Labour Relations** provides advanced level study of conflict in industrial relations, its determinants, the various institutional procedures used to deal with it, and the effectiveness of these same procedures. Topics examined include: theories of industrial conflict; the legal framework; union and employer strategies; interest dispute resolution; the right to strike and alternatives to same; the role and effectiveness of alternative forms of voluntary and compulsory third party assistance; etc. Students may be exposed to various role playing exercises that are applicable to a career in industrial and labour relations.

Prerequisite: Business 6320.

**7322 Labour Law** provides an overview of laws regulating the employment relationship in Canada, including the common law, general employment and collective bargaining laws, and the Charter of Rights and Freedoms. Emphasis is placed on the law of collective bargaining in the private sector, including the acquisition and termination of bargaining rights, unfair labour practices, the duty to bargain, industrial conflict and the administration of the collective agreement.

Prerequisite: Business 6320.

**7330 Organizational Development** - inactive course.

**7400 Simulation in Management** - inactive course.

**7500 Advanced Finance** examines advanced developments in finance. Several topics will be selected, researched and discussed. These topics shall vary as financial practices change.

Prerequisites: Business 5500 or the former Business 5140, and Business 6510 or the former Business 6140.

Note: *This course was formerly Business 7130. Credit may not be obtained for both Business 7500 and Business 7130.*

**7510 Options and Futures** is an extension of B6510 Investments which will introduce the student to the workings of the options and futures markets. Specific topics will include the institutional structure of the markets, option pricing, strategies such as straddles and spreads, hedging, spot/forward/futures markets, speculation, risk transference and market efficiency considerations.

Prerequisites: Business 6510 or the former Business 6140.

Note: *This course was formerly Business 7170. Credit may not be obtained for both Business 7510 and Business 7170.*

**7600 Current Topics in Entrepreneurship** endeavours to address recent research findings in various aspects of entrepreneurship. Students will have the opportunity to pursue issues in entrepreneurship development covering a wide range of topics using publications, journals and conference proceedings.

Prerequisite: Business 5600.

Note: *This course was formerly Business 7032. Credit may not be obtained for both Business 7600 and Business 7032.*

**7610 Regulatory and Taxation Issues for Small Business** is designed to provide students with a general knowledge base of the various tax and other regulatory issues that should be considered in starting a business. The role that tax plays in decision making will be examined as well as the types of corporate funding to establish a new business through government grants, conventional loans and tax credits as provided under the Income Tax Act. Alternative corporate structures will be examined as well as aspects of employee compensation and business valuations. Practical aspects of starting your own business, such as registration requirements, will also be examined.

Prerequisite: Business 1101 or the former Business 3100.

**7700 Strategic Information Systems** examines the growing importance of information systems in helping organizations to achieve and sustain a competitive advantage. Topics covered may include: frameworks for identifying strategic applications, the role of information systems in redesigning business processes, interorganizational systems, identifying and managing risks associated with SIS, supporting globalization, and strategic implications of emerging technologies.

Prerequisite: Business 6701.

**7701 Current Topics in Information Systems** examines new developments and trends in information systems. The scope of the course includes: implications of emerging hardware and software technologies, emerging systems applications, and the state-of-the-art in IS management practice. Specific topics will change each year. Readings assigned from professional and academic journals will form the basis of class discussion.

Prerequisites: Business 5700, Business 6700, and Business 6701.

## 18.4 Work Term Descriptions

The following work terms are a requirement of the Bachelor of Commerce Co-operative program only.

The objectives of the Work Term component of the Business Administration Co-operative Program are embodied in the Work Term descriptions below. The descriptions serve to guide the student and employer toward achieving these objectives and to guide Business Administration Co-operative Education and the Faculty of Business Administration in monitoring and evaluating each student's progress.

**399W Work Term I** follows the successful completion of Academic Term 3. For most students, it represents their first professional work experience in a business environment and as such represents their first opportunity to evaluate their choice of pursuing a career in business administration. Students are expected to learn, develop and practice the high standards of behaviour and performance normally expected in the work environment. (A detailed description of each job is normally posted during the job competition.)

As one component of the work term, the student is required to complete a work report. The work report, as a minimum requirement should

1. analyze an issue/problem related to the student's work environment,
2. demonstrate an understanding of the structure of a professional report, and
3. show reasonable competence in written communication and presentation skills. (Students should consult the evaluation form provided in the placement package.)

Note: *Seminars on professional development, conducted by Business Co-operative Education, are presented during Academic Term 3 to introduce and prepare the student for participation in the subsequent work terms. Topics may include, among others, work term evaluation, work report writing, career planning, employment seeking skills, resume preparation, self-employment, ethics and professional concepts, behavioural requirements in the work place, assertiveness in the work place and industrial safety.*

**499W Work Term 2** follows the successful completion of Academic Term 4. Students are expected to further develop and expand their knowledge and work-related skills and should be able to accept increased responsibility and challenge. In addition, students are expected to demonstrate an ability to deal with increasingly complex work-related concepts and problems. Students should conscientiously assess the various business opportunities relative to their individual interests.

The Work Report, as a minimum requirement should

1. analyze an issue/problem related to the student's work environment and demonstrate an understanding of business concepts relative to the student's academic background,
2. demonstrate competence in creating a professional report, and
3. show competence in written communication and presentation skills.

**599W Work Term 3** follows the successful completion of Academic Term 5. Students should have sufficient academic grounding and work experience to contribute in a positive manner to the management and problem-solving processes needed and practiced in the work environment. Students should become better acquainted with their discipline of study, should observe and appreciate the attitudes, responsibilities, and ethics normally expected of business managers and should exercise greater independence and responsibility in their assigned work functions.

The Work Report should reflect the growing professional development of the student and, as a minimum requirement, will

1. demonstrate an ability to analyze a significant business issue/problem related to the student's experience in the work environment,

- demonstrate a high level of competence in producing a professional report, and
- show a high level of competence in written communication and presentation skills.

student will undertake an analysis of an assigned case. A written report is mandatory. Evidence of the student's understanding of various business methods and the ability to gather material relating to the report, analyze it effectively, and present it in a clear, logical and concise form, will be required in the report. (NO CREDIT AWARDED).  
Prerequisite: Approval of the Dean, or delegate.

## 18.5 Comprehensive Case Analysis Descriptions

The following courses of study are academic requirements of the Diploma in Business Administration and Bachelor of Commerce Programs only and do not carry academic credit.

**450W Business Methods in Practice I** is a non-credit course in which each

**750W Business Methods in Practice II** is a non-credit course in which each student will undertake an analysis of an assigned case or complete a research project. A student wishing to undertake a research project must have prior Faculty approval. A written report is mandatory. (NO CREDIT AWARDED).

Prerequisite: Approval of the Dean, or delegate.

## 19 Curriculum Tables

**Bachelor of Commerce (Co-operative) Curriculum Table**

Terms A/B (Fall and Winter)	Six credit hours in English courses* Mathematics 1000 Economics 2010 and 2020 Business 1000 Twelve additional credit hours in non-Business electives, at least 9 credit hours of which must be in courses chosen from the Faculties of Arts and/or Science and/or the School of Music
Term One (Fall)	Business 1101 Business 1201 Statistics 2500. Nine credit hours chosen from: Business 1600 Business 2000 Business 2401 Computer Science 2801 Six credit hours in non-Business electives**
Term Two (Winter)	Business 2101 Business 2201 Business 2301 Remaining 9 credit hours chosen from: Business 1600 Business 2000 Business 2401 Computer Science 2801 Six credit hours in non-Business electives**
Spring	
Term Three (Fall)	Business 3320 Business 3401 Business 3700 Six credit hours in elective courses
Work Term I (Winter)	Business 399W
Term Four (Spring)	Business 4000 Business 4320 Business 4401 Business 4500 Economics 3150
Work Term II (Fall)	Business 499W
Term Five (Winter)	Business 5301 Twelve credit hours in elective courses**
Work Term III (Spring)	Business 599W
Term Six (Fall)	Business 7000 Twelve credit hours in elective courses**
Term Seven (Winter)	Fifteen credit hours in elective courses**

\* It is recommended that students complete English 1110 as one of these English courses.

\*\* Of the 51 credit hours in elective courses required in the program from Terms 1 through 7, 30 must be chosen from Business courses (including non-Business courses prescribed for a concentration) and 21 must be non-Business courses. Of the 21 credit hours in non-Business electives, at least 15 must be chosen from the Faculties of Arts and/or Science and/or the School of Music.



**Bachelor of Commerce (Co-operative) Curriculum (Completed Jointly with the Degree of Bachelor of Arts) Table**

Please refer to the calendar entry for the Faculty of Arts for complete course descriptions and regulations for the Bachelor of Arts degree.

Terms A/B (Fall and Winter)	Six credit hours in English courses*; Mathematics 1000; Economics 2010 and 2020; Business 1000; Twelve additional credit hours in non-Business electives, at least 9 credit hours of which must be in courses chosen from the Faculties of Arts and/or Science and/ or the School of Music.
Term One (Fall)	Business 1101 Business 1201 Statistics 2500 Nine credit hours chosen from: Six credit hours in Major, Core or elective courses [see Note 1. below] Business 1600 Business 2000 Business 2401 Computer Science 2801
Term Two (Winter)	Business 2101 Business 2201 Business 2301 Remaining 9 credit hours chosen from: Business 1600 Business 2000 Business 2401 Computer Science 2801 Six credit hours in Major, Core or elective courses [see Note 1. below]
Spring	[see Note 2 below]
Term Three (Fall)	Business 3320 Business 3401 Business 3700 At least 6 credit hours in Major, Core or elective courses [see Note 3 below]
Work Term 1 (Winter)	Business 399W [see Note 2. below]
Term Four (Spring)	Business 4000 Business 4320 Business 4401 Business 4500 Economics 3150
Work Term II (Fall)	Business 499W [see Note 2. below]
Term Five (Winter)	Business 5301 At least 12 credit hours in Major, Core or elective courses [see Note 3. below]
Work Term III (Spring)	Business 599W [see Note 2. below]
Term Six (Fall)	Business 7000 At least 12 credit hours in Major, Core or elective courses [see Note 3. below]
Term Seven (Winter)	At least 15 credit hours in Major, Core or elective courses [see Note 3. below]

\* It is strongly recommended that students complete English 1110 as one of these English courses.

Notes: 1. The degree of Bachelor of Arts requires completion of a Major program, a Minor program, a set of Core Requirements, and elective courses, totalling at least 78 credit hours in courses offered by departments within the Faculty of Arts (or Computer Science, Mathematics and Statistics, and Psychology). When the degree of Bachelor of Arts is completed jointly with the degree of Bachelor of Commerce (Co-operative):

- a. Minor program requirements are satisfied by Business courses specified in the **Bachelor of Commerce (Co-operative) Curriculum Table** above.
  - b. Core requirements for English and Numeracy/Science are satisfied by courses completed in Terms A/B or during Terms 1 or 2 of the Bachelor of Commerce (Co-operative) degree.
  - c. It is recommended that the Core Requirement for 6 credit hours in courses in a second language be completed in Terms A/B of the Bachelor of Commerce (Co-operative) degree program.
  - d. Core requirements for 6 credit hours in research/writing courses may be satisfied by including two such courses within the 78 credit hours in courses offered by departments within the Faculty of Arts. Please consult the Undergraduate Registration Procedures booklet to determine research/writing course offerings in any given semester.
  - e. Major requirements for the degree of Bachelor of Arts may be satisfied in 36 to 45 credit hours, depending on the department or program chosen. Students are strongly recommended to seek advice from the department or program of their Major to ensure that their proposed degree program is possible within the constraints of course scheduling and prerequisites.
2. Students are advised that, in order to complete the joint degrees within the minimum 150 credit hours, they should be prepared to complete at least three of the courses required for the degree of Bachelor of Arts as opportunities arise and as courses are offered. Following Term 2 of the program for the Bachelor of Commerce (Co-operative) degree, these courses may be completed during the Spring semester between Terms 2 and 3, or during any of the three Work Terms (for example, in the evening or by distance), or as sixth courses during any of Terms 3, 4, 5, 6 or 7 (following submission of a course load waiver).
3. To meet the requirements for the degree of Bachelor of Commerce (Co-operative), not fewer than 15 and not more than 30 credit hours in elective courses must be chosen from Business courses (including non-Business courses prescribed for a concentration). Students intending to complete the joint degrees in the minimum number of 150 credit hours should ensure that at least 78 of these credit hours are completed in courses offered by departments within the Faculty of Arts (or Psychology, Mathematics and Statistics, and Computer Science). Careful planning, particularly in the selection of elective courses as well as in the sequence of Major program courses, is therefore recommended to ensure timely completion of the joint degrees.

**Bachelor of Commerce (Co-operative) Curriculum (Completed Jointly with the Degree of Bachelor of Science with a Major In Computer Science) Table**

Terms A/B (Fall and Winter)	Six credit hours in English courses*; Six credit hours in Mathematics courses, which must include Mathematics 1000; Economics 2010 and 2020; Business 1000; Computer Science 1710; Six additional credit hours in Science electives.
Term One (Fall)	Business 1101 Business 1201 Statistics 2500 or Statistics 2510 Computer Science 2710 Computer Science 2742 Business 1600
Term Two (Winter)	Business 2000 Business 2101 Business 2201 Business 2301 Business 2401 Pure Mathematics/Discrete Mathematics 2320
Spring	[see Notes 1. and 2. below]
Term Three (Fall)	Business 3320 Business 3401 Business 3700 Computer Science Computer Science 2760
Work Term I (Winter)	Business 399W [see Note 1. below]
Term Four (Spring)	Business 4000 Business 4320 Business 4401 Business 4500 Economics 3150
Work Term II (Fall)	Business 499W [see Note 1. below]
Term Five (Winter)	Business 5301 Computer Science 3719 Computer Science 3724 Six credit hours of electives [see Note 3. below]
Work Term III (Spring)	Business 599W [see Note 1. below]
Term Six (Fall)	Business 7000 Computer Science 3715 Computer Science 3716 Computer Science 3725 Three credit hours of electives [see Note 3. below]
Term Seven (Winter)	Computer Science 3754 Computer Science 4770 1 Computer Science elective Six credit hours of electives [see Note 3. below]

\*It is recommended that students complete English 1110 as one of these English courses.

- Notes: 1. Students are advised that, in order to complete the joint degrees within the minimum 150 credit hours, they should be prepared to complete at least three of the courses required for the degree of Bachelor of Science as opportunities arise and as courses are offered. Following Term Two of the program for the Bachelor of Commerce (Co-operative) degree, these courses may be completed during the Spring semester between Terms 2 and 3, or during any of the three Work Terms (for example, in the evening or by distance), or during Terms 3, 4, 5, 6 or 7 (following submission of a course-load waiver).
2. To meet the requirements for the Joint Degree in the minimum number of 150 credit hours, careful planning, particularly in the selection of elective courses as well as in the sequence of Major program courses, is recommended to ensure timely completion. Also note that, in order to meet the Science general regulations, students must have completed courses in at least four areas of Science.
3. Six credit hours must be Business electives and 6 credit hours must be Science electives.

Archived Previous Calendar  
Current University Calendar available at  
[mun.ca/university-calendar](http://mun.ca/university-calendar)

# SCHOOL OF SOCIAL WORK

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## 1 School Description

A social work program at Memorial University of Newfoundland commenced in 1963 with the offering of a two-year diploma in public welfare. In 1965 the Bachelor of Arts (Social Welfare) degree was initiated, continuing until 1970 when the Bachelor of Social Work was established. The Bachelor of Social Work program is accredited by the Canadian Association of Schools of Social Work. The program is accredited to 2010 having received the highest possible accreditation of seven years. The School also offers an undergraduate diploma and graduate degrees at the master and doctoral level.

Social work courses are designed for delivery on a philosophical base of humanism and social justice. This is accomplished in an empowering teaching and learning environment, through the practice of anti-oppression principles, within the context of critical thinking. The curriculum in social work draws upon the substance and analytical processes of the social and behavioural sciences and of the humanities. It reflects Memorial University of Newfoundland's and the School of Social Work's traditional commitments to serve the people of Newfoundland and Labrador within a global context.

Students must meet all regulations of the School of Social Work in addition to those stated in the general regulations. For information concerning fees and charges, admission/readmission to the University, and general academic regulations (undergraduate), refer to **UNIVERSITY REGULATIONS**.

## 2 Description of Programs

All courses of the School are designated by the abbreviation SCWK.

### 2.1 Bachelor of Social Work

The Bachelor of Social Work is a five-year full-time program comprised of course work and two internships. The degree qualifies graduates for beginning professional practice in social work settings. The objectives of the undergraduate program include the achievement of a liberal education involving general knowledge of people and nature, analytical and critical competence and personal social responsibility; and the learning of the fundamental knowledge, values and skills necessary for professional practice. The aim of the program is to develop social workers with broadly-based skills for working with individuals, families, communities, and groups. Students receive an education which prepares them to work in urban centres and rural settings. A special emphasis is placed on the importance of identifying local needs and developing the means of meeting these needs in the context of available resources.

There is a residency regulation requiring students to take a specified number of courses on the St. John's campus. Although the majority of courses are taught on-campus, selected courses are occasionally taught by distance delivery, which uses a variety of teaching methods including web-based format, traditional correspondence (reading packages, mailed assignments), and teleconference.

#### 2.1.1 Social Work Internships

- In addition to their course work, students are required to complete two supervised internships. During the Fall Term of the fourth year of their program, students spend four days per week in a placement. During the Winter Term of the fifth year of their program, students spend five days per week in a placement.
- Although consideration will be given to all factors affecting the location and type of internship, the final decision regarding placement rests with the School.
- Students are responsible for all costs associated with internships including travel and accommodation.
- Placements for most students will include residence in a centre away from St. John's, Mount Pearl, and Corner Brook. This normally occurs in the final year of the program.

### 2.2 Bachelor of Social Work as a Second Degree

The Bachelor of Social Work as a Second Degree program has been discontinued. Any student, previously admitted to the Bachelor of Social as a Second Degree program, and in good standing, must complete the requirements by the end of the fifth year following admission. An advanced standing entry into the Bachelor of Social Work program is under consideration.

### **2.3 Diploma in Social Work**

Pending availability of resources, a program leading to the Diploma in Social Work may be designed for groups of students with particular needs. Admission of individual students to a diploma program is competitive and selective. Groups can obtain information about diploma programs by contacting the Director of the School of Social Work.

### **2.4 Special Offerings**

The School of Social Work may deliver special offerings of the Bachelor of Social Work, diploma and/or other programs to identified groups of students where numbers warrant and resources permit. For more information about these programs, contact the Director of the School of Social Work.

## **3 Admission/Readmission Regulations for the Bachelor of Social Work Program**

In addition to meeting the *UNIVERSITY REGULATIONS* students must meet the admission/readmission regulations for the School of Social Work.

### **3.1 General Information**

1. Entry to the program is competitive for a limited number of placements.
2. Selection of candidates will be based on academic standing, relevant work/volunteer experience, and personal suitability for a career in social work. The School reserves the right to deny admission/readmission to any student, if in the judgment of the Admissions Committee the student is deemed unsuitable for admission/readmission to the program.
3. The School may, at its discretion, give preference to applicants with special needs, provided that they have met the minimum grade and course requirements for admission to the program.
4. Students applying for readmission must meet all admission and promotion requirements of the School of Social Work.

### **3.2 Application Forms and Deadlines**

1. Application forms are available in person from the School and the Office of the Registrar. Application forms may be obtained by writing the School of Social Work, Memorial University of Newfoundland, St. John's, NL, A1C 5S7 or the Office of the Registrar, Admissions Office, Memorial University of Newfoundland, St. John's, NL, A1C 5S7.
2. All application forms and accompanying documents for admission to the program must be submitted to the Office of the Registrar of the University on or before the deadline of March 1 in any year. The program commences in the Fall semester.
3. Applicants for readmission to the School of Social Work must complete a School of Social Work application and submit it to the Office of the Registrar by March 1 for Fall semester readmission, February 1 for Spring semester readmission, and October 1 for Winter semester readmission. Applications received after these deadlines will be considered only if a place is available in the School of Social Work.

### 3.3 Admission Requirements

1. To be considered for admission to the program applicants are required to complete a minimum of 45 credit hours in the courses indicated in **Table 1 Course and Credit Hour Requirements**. These courses and credits must have been taken at Memorial University of Newfoundland or accepted for credit from a recognized university or university college. Applicants must have achieved an average of at least 65% in the courses comprising the last 30 credit hours attempted by the deadline date for application and for which a grade was given. Courses for which applicants are registered during the Winter term of the year for which they are applying will not be included in this calculation.
2. In addition to other criteria used in the selection process, the applicants for admission will be ranked according to their academic standing, which will be based on their overall academic performance, cumulative average based on the last 30 credit hours for which a grade was given, and the overall average of the 45 prerequisite credit hours.
3. Applicants who are accepted for admission to the program must complete an additional 15 credit hours before beginning Year 3 of the program. See **Table 1 Course and Credit Hour Requirements** for details. During the period between the date of application and the beginning of Year 3, applicants will be required to meet the **Academic Requirements and Promotion Regulations** of the School of Social Work.
4. A student will not be considered for admission if he/she has attempted and failed two or more SCWK courses or has repeated a SCWK course more than once.

**Table 1 Course and Credit Hour Requirements**

Courses and Credit Hours Required for Application	Courses and Credit Hours Required Before Beginning Year 3
6 credit hours in English	
Psychology - students may choose Option A or B. Option A 9 credit hours in Psychology, at least 3 of which must be chosen from Psychology 2010, 2011, 2012, or equivalent. Option B 9 credit hours in Psychology, at least 3 of which must be Psychology 2025.	Psychology - students must complete additional courses in the option they chose for application. Option A Although only one of Psychology 2010, 2011, 2012, or equivalent must be completed prior to the application deadline, the other courses in this grouping must be completed prior to beginning Year 3 of the program. Option B Psychology 2012 and an additional 3 credit hours in a psychology course beyond the first year level must be completed prior to beginning Year 3 of the program.
3 credit hours in Sociology	3 credit hours in Sociology
3 credit hours in either Anthropology, Geography, or Political Science	
Social Work 2510 and/or Social Work 2700 (a minimum numeric grade of 65% is required in each of these courses).	Although only one of Social Work 2510 or Social Work 2700 must be completed prior to the application deadline, the other course in this grouping must be completed prior to beginning Year 3 of the program. A minimum grade of 65% is required in each of these courses.
3 credit hours chosen from Philosophy 2800-2810 or Women's Studies 2000	
Further courses from <b>Table 2 Electives</b> to make up 45 credit hours.	Further courses from <b>Table 2 Electives</b> to make up 15 credit hours.

**Table 2 Electives**

Subject to overall degree regulations, a candidate must complete 33 credit hours chosen from the following:

All courses in the Faculty of Arts and the Faculty of Science to a maximum of 33 credit hours excluding all required arts and science courses as outlined <b>Table 1 Course and Credit Hour Requirements</b> .
A maximum of 18 credit hours from subject areas other than in arts, science and social work.
No more than 24 credit hours in these electives may be taken from any single subject.

### 3.4 Acceptance Procedures for Admission

1. Applicants will normally be notified of admission decisions by May 15. Approved applicants to the School of Social Work will be admitted in Fall semester only.

## 4 Program Regulations for the Bachelor of Social Work

### 4.1 General Information

- The Bachelor of Social Work program requires 150 credit hours, which include required and elective courses, as outlined in **Table 3 Bachelor of Social Work**. The program includes two internships and a residency period.
  - The program courses shall normally be taken in the academic terms in the sequence and course load as set out in **Table 3 Bachelor of Social Work**.
  - Students wishing to change the sequence and/or reduce the course load in a term must receive the written approval from the Director of the School.
  - No student beyond Year 3 of the program will be permitted to use as a Table 2 elective any course completed after Year 3 that is numbered below 3000 except with the written consent of the Director.
  - Students must complete the application for Social Work internship placement three months prior to the semester in which the internship begins.

### 4.2 School of Social Work Residency Requirements

- Students shall be required to successfully complete the following nine social work courses on the St. John's campus: SCWK 3211, 3220, 3320, 3321, 3421, 3510, 5322, 5325, and 5720.

**Table 3 Bachelor of Social Work**

For courses required for admission and to be completed before beginning Year 3 see <b>Table 1 Course and Credit Hour Requirements</b>		
Term	Required Courses	Elective Courses
Fall Year 3	SCWK 3211 SCWK 3220 SCWK 3320	6 credit hours in accordance with <b>Table 2 Electives</b>
Winter Year 3	SCWK 3321 SCWK 3421 SCWK 3510	6 credit hours in accordance with <b>Table 2 Electives</b>
Fall Year 4	SCWK 4311 SCWK 4300	
Winter Year 4	SCWK 4320 SCWK 4421 SCWK 4520	6 credit hours of Social Work electives
Fall Year 5	SCWK 5322 SCWK 5325 SCWK 5720	6 credit hours of Social Work electives
Winter Year 5	SCWK 5300	

## 5 Academic Requirements and Promotion Regulations

### 5.1 General Information

- The Committee on Undergraduate Studies will determine a student's promotion status at the end of each academic term.
- These regulations shall apply from the date of the application for admission to the program to the completion of the program.
- In addition to meeting the academic requirements and promotion regulations for the School all students must meet the general academic regulations (undergraduate). For further information refer to **UNIVERSITY REGULATIONS - General Academic Regulations (Undergraduate)**.

### 5.2 Promotion Status

A student's promotion status at the end of each term will be in one of the following three categories:

#### 5.2.1 Clear Promotion

Clear Promotion means that a student can proceed to the next term without restrictions. Clear Promotion will be given to a student

- who has completed the academic term with an overall average of at least 65% and with a numeric grade of at least 65% in each SCWK course.
- who has completed an internship with a letter grade of PAS (pass).
- who has maintained professional behaviour consistent with the current Code of Ethics of the Canadian Association of Social Workers.

#### 5.2.2 Probationary Promotion

Probationary Promotion means that a student has not received a Clear Promotion and must meet certain conditions to obtain Clear Promotion. Probationary Promotion will be given to a student

- who has not obtained an overall term average of at least 65%. The student will be issued a letter of warning and must obtain an overall average of at least 65% in the subsequent academic term.
- who has not obtained a numeric grade of at least 65% in each required SCWK course. The student must repeat the course(s) within



three academic terms from the unsuccessful completion and obtain a numeric grade of at least 65%. The student will not be permitted to repeat more than two SCWK courses in the program.

- who has not obtained a numeric grade of at least 65% in each elective SCWK course. The student must successfully complete this course or another appropriate SCWK elective with a numeric grade of at least 65% before completion of the program. The student will not be permitted to repeat more than two SCWK courses in the program.
- who has voluntarily withdrawn from an internship before its completion with the prior approval of the Field Administrator and the Committee on Undergraduate Studies. In addition to the designation Probationary Promotion, the student will also receive a letter grade of DR (drop) for that internship. The student will be required to successfully complete another internship before continuing the program in the course load and sequence as outlined in **Table 3 Bachelor of Social Work**.
- whose behaviour has breached the current Code of Ethics of the Canadian Association of Social Workers in a manner for which the School considers that withdrawal from the program is not warranted.

### 5.2.3 Promotion Denied

Promotion Denied means that a student has not received a Clear Promotion and must withdraw from the School. Promotion denied will be given to a student

- who has not met the conditions of his/her probation.
- who has received a numeric grade of less than 65% in more than two SCWK courses.
- who has withdrawn from an internship without the prior approval of the Field Administrator and the Committee on Undergraduate Studies or who has conducted him or herself in such manner as to cause the agency and the Field Administrator to terminate the internship. The student will receive a letter grade of FAL (fail) in that internship.
- who has received a letter grade of FAL (fail) in an internship.
- whose behaviour has breached the current Code of Ethics of the Canadian Association of Social Workers in a manner for which the School considers that withdrawal from the program is warranted.

### 5.3 Other Information

1. A student will not be eligible for consideration for admission or readmission to the School if he/she has been required to withdraw for any of the following reasons:
  - received a numeric grade of less than 65% in more than two SCWK courses in the entire program, or having received a numeric grade of less than 65% in a SCWK course twice;
  - received a letter grade of FAL (fail) in more than one internship; or
  - the student's behaviour has breached the current Code of Ethics of the Canadian Association of Social Workers in a manner for which the School considers that withdrawal from the program is warranted.
2. A student who has been denied promotion and has had to withdraw from the School but is eligible for consideration of readmission to the School
  - must withdraw from the School for two academic terms before reapplying; and
  - will be permitted only one readmission to the School.

### 5.4 Leave of Absence

1. Any student who wishes to withdraw from the program and to retain his/her status in the program may do so only with the written approval of the Committee on Undergraduate Studies and for a maximum period of one academic year. A student who wishes to resume his/her studies within this period must notify the Director in writing three months prior to the beginning of the term in which he/she wishes to continue his/her program.

## 6 Waiver of School Regulations

Every student has the right to request waiver of School regulations. Students wishing waiver of University academic regulations should refer to **UNIVERSITY REGULATIONS - General Academic Regulations (Undergraduate) - Waiver of Regulations**.

### 6.1 General Information

- The School reserves the right in special circumstances to modify, alter, or waive any School regulation in its application to individual students where merit and equity so warrant in the judgment of the Committee on Undergraduate Studies of the School.
- All requests must be submitted to the Committee on Undergraduate Studies of the School for consideration.
- Students requesting a waiver of a School regulation must submit their request in writing to the Chair of the Committee on Undergraduate Studies. Medical and/or other documentation to substantiate the request must be provided.
- Any waiver granted does not reduce the total number of credit hours required for the degree.

## 7 Appeal of Regulations

1. Any student whose request for waiver of School regulations has been denied has the right to appeal. For further information refer to **UNIVERSITY REGULATIONS - General Academic Regulations (Undergraduate) - Appeal of Regulations**.
2. An applicant who has been denied admission has the right to appeal this decision of the Admissions Committee if it is felt by the applicant that the decision was reached on grounds other than those outlined in **Admission/Readmission Regulations for the Bachelor of Social Work Program**. The appeal should be made in writing within fourteen days of the notification of the decision and should be directed to the Director of the School. The letter should state clearly and fully the grounds for the appeal. If the Director of the School, in consultation with the Registrar, judges the grounds to be sufficient, the formal appeals mechanism will be initiated.

## 8 SCWK Courses Available to Students Not Admitted to a Program Offered By the School

If space is available students may be permitted to register for any SCWK course with the approval of the Director, School of Social Work.

## 9 Course Descriptions

In accordance with Senate's *Policy Regarding Inactive Courses*, the course descriptions for courses which have not been offered in the previous three academic years and which are not scheduled to be offered in the current academic year have been removed from the following listing. For information about any of these inactive courses, please contact the Director of the School.

All courses of the School are designated by SCWK.

**2510 Social Policy Formulation and Analysis** examines and applies concepts of ecological systems, social responsibility, socioeconomic well-being, prevention, and other social policy and administration concepts to policy analysis and formulation.

CR: the former SCWK 2710

**2700 Social Work Philosophy and Practice** provides an overview of the historical development, philosophical orientation, basic values, principles and knowledge base, and fields of practice of the profession.

**3211 Human Behaviour and Social Environment: Individuals and Families** is the first foundation course that addresses a number of social and behavioral theories and concepts and considers them within the context of major schools of thought for understanding human behaviour and development from a social work perspective. The primary focus is on how theories and information guide social work interventions with individuals and families.

PR: Psychology 2010, 2011, and 2012 or Psychology 2025 and 2012

**3220 Human Behaviour and Social Environment: Groups and Society** is the second foundation course, normally taught concurrently with Social Work 3211, that addresses a number of social, economic, political and behavioral theories and concepts from a social work perspective. The primary focus is on how these theories and information guide social work interventions with society and social groups.

PR: Psychology 2010, 2011, and 2012 or Psychology 2025 and 2012

**3230 Cultural Camp** - inactive course.

**3310 Introduction to Forensic and Police Interviewing** is designed to teach applied skills for police and forensic interviewing. Content includes general skills of relationship building and interviewing to enable reliable and valid information to be obtained, as well as to help stabilize crises and reduce risks in dangerous situations. The course includes specific content on interviewing victims, witnesses, suspects, offenders and other collaterals. The course will also introduce the student to interviewing difficult persons such as those experiencing crisis or trauma and those who are impaired or who have mental health problems. Students are tested on both knowledge and practice skills related to police and forensic interviewing.

PR: admission to the Diploma in Police Studies

**3320 Social Work Practice: Interviewing and Professional Communication** provides practical application of the theories covered in these courses. This course introduces students to the use of professional relationships, communication and interviewing skills. Attention is given to the development of self-awareness, beginning counselling skills and professional identity.

CO: SCWK 3211 and 3220

**3321 Biopsychosocial Assessment: Individuals and Families in Community Context** focuses on the development and application of self awareness and theoretical learning with beginning practice skills. Developing awareness of and an ability to apply anti-oppressive practice stance and values in the creation of a biopsychosocial assessment will be emphasized. Upon completion of this course, it is expected that students will be able to conduct and write a biopsychosocial assessment.

CR: the former SCWK 4310

PR: SCWK 3211, 3220, and 3320

**3421 The Process of Change: Middle and End Phase Interventions** introduces students to the concept and process of change at both the micro and macro levels of social work practice. This course focuses on the theories, concepts, and skills that enable the social worker to take informed professional action in the middle and end phases of intervention to facilitate positive change.

CO: SCWK 3321

PR: SCWK 3211, 3220, and 3320

**3510 Health and Social Policy Analysis: National and Provincial Programs** considers how Canadians have taken social responsibility at

National, Provincial, and local levels, with particular reference to Newfoundland. Policies, programs and their organizations are considered in historical, comparative and developmental contexts. Concepts for the assessment and evaluation of policies and programs are reviewed and applied.

CR: the former SCWK 3110 and 4111

PR: SCWK 2510

**3511 Aboriginal People and Social Policy** - inactive course

**3530 Aboriginal Social Development** - inactive course

**4300 Social Work Internship I** provides students within a supervised field experience with opportunities to apply theory learned in the classroom and applied to clients in social work agencies. By the end of fourth year field students will have begun to develop their professional use of self in working with a variety of people. They will have shown beginning knowledge and skills in the application of a planned intervention process in working in a logical orderly and purposeful way with different kinds of client systems. Normally, the internship occurs in the Fall semester of the fourth year and students spend four days a week, twenty-eight hours in the internship.

CH: 12

CO: SCWK 4311

CR: the former SCWK 4315, 4316, 4325, and 4326

PR: completion of all required third year courses

**4311 Social Work Practice: Counselling and Case Management with Individuals and Families in a Community Context** is an intervention course which focuses on selected models of practice with individuals and families. Students are introduced to methods and skills derived from a number of theories as applied to social work with an emphasis on work with individuals. Attention will be given to building awareness of links between theory and practice. This course may have a required laboratory period that is in addition to class time. The distance version of the course may include workshops held outside the area in which students are completing an internship.

CO: SCWK 4300

CR: the former SCWK 4310

PR: SCWK 3211, 3220, 3320, 3321, 3421, and 3510

**4320 Social Work Practice: Counselling and Case Management with Groups and Communities** is an intervention course where students are introduced to methods and skills derived from a number of theories as applied to social work with groups and communities with a special emphasis on groups. This course builds directly on constructs and theories introduced in Social Work 4311. This course may have a required laboratory period that is in addition to class time. The distance version of the course may include workshops that may be held outside the area in which students are completing an internship.

PR: SCWK 4311

**4421 Research and Evaluation for Social Work Practice** is designed to teach theories, concepts and methods of systematic inquiry. Emphasis is placed on the philosophy and logic of systematic inquiry. These emphases are considered within the context of the relationship between systematic inquiry and professional judgement and action.

CR: the former SCWK 4420

PR: completion of all required third year courses

**4520 Management and Organization Development for Community Services** examines human service organizations and their administration. Management and Organizational Concepts, suitable for the administration of social policies and programs, are addressed, as are ethical and ideological issues for social workers on human service teams. A focus on beginning skills in program planning and continuous quality improvement is included.

PR: SCWK 2510 and 3510

**4610 Social Work in Health and Rehabilitation** focuses on social work practice in institutional and community settings serving acutely or chronically ill, or permanently disabled persons. It is constructed around a comprehensive model of health, illness, and associated psychosocial factors. Theoretical and service delivery issues are addressed, including social work participation in multidisciplinary teams.

CR: the former SCWK 5610

PR: SCWK 3320, 3321, and 3421

**4612 Social Work in Corrections** examines criminal and delinquent activities and the provision of services to adult and young offenders. Theories of criminal behaviour are examined and their implications for social work practice addressed.

CR: the former SCWK 5612

PR: SCWK 3320, 3321, and 3421

**4614 Social Work in Family and Child Welfare: Prevention, Crisis Intervention and Protection** examines the rights of children, their needs, specific programs and research findings in child welfare service with particular emphasis on the care and protection of children within a community context. Social work interventions with problems such as child abuse, and other forms of couple and family violence and families experiencing complex problems are addressed.

PR: SCWK 3320, 3321, and 3421

**4615 Social Work in Gerontology** reviews ageing from a biopsychosocial perspective and examines selected problems of older people in Canadian society, with an emphasis on contemporary Newfoundland and Labrador. Federal and Provincial social policies are considered with specific attention given to community services and programs of institutional care.

CR: the former SCWK 5615

PR: SCWK 3320, 3321, and 3421

**4616 Social Work in Addictions** introduces the problem of modifying chemical use and abuse, its effect on individuals and families throughout the lifecycle, and community responses for prevention and addiction problem management. Social work intervention with individuals, families, groups and communities suffering from the effects of addiction problems is addressed. Skills are tested through a demonstration in a simulation context.

PR: SCWK 3320, 3321, and 3421

**4617 Social Work in Residential Care** - inactive course

**5000 Relapse Prevention in Addictions Counselling** - inactive course

**5010 Addictions Counselling with Families** - inactive course

**5020 Group Counselling in Addictions** - inactive course

**5030 Clinical Consultation in Addictions** - inactive course

**5031 Clinical Internship in Addictions** - inactive course

**5112 Family Law for Social Workers** - inactive course

**5211 Social Work Practice With Problems and Issues of Human Sexuality** - inactive course

**5220-5229 Selected Topics in Human Behaviour and the Social Environment** may be offered by the School. Students should consult the School for course offerings listed under selected topics in a given semester.

**5300 Social Work Internship II** is a supervised field experience that builds on knowledge and skills acquired in the fourth year internship with an emphasis on independent work activity. Emphasis is on the in-depth development of the basic skills of practice with client systems of any size - individuals, families, small groups, organizations and communities; including conscious use of major social work roles and evidence of growth towards independent professional judgement. This internship occurs normally during the winter semester of the fifth year of the program and students spend five days a week, thirty-five hours in the internship placement.

CH: 15

CR: the former SCWK 5315, 5316, 5317, 5318, and 5319

PR: completion of all required and elective fourth and fifth year courses

UL: not applicable to the former Bachelor of Social Work as a Second Degree program

**5301 Social Work Internship II** is a supervised field experience that builds on knowledge and skills acquired through the fourth year field experience and the student's prior work experience with an emphasis on independent work activity. Emphasis is on the in-depth development of the basic skills for practice with client systems of any size - individuals, families, small groups, organizations and communities; including conscious use of major social work roles and evidence of growth towards independent professional judgement. This internship occurs normally during the spring semester of the program and students spend four days a week, twenty-eight hours in the internship placement.

CH: 12

CR: the former SCWK 5315, 5316, 5217 and 5318

PR: SCWK 4311, 4300 and 4320

UL: applicable only to the former Bachelor of Social Work as a Second Degree program

**5320-5321 Selected Topics in Social Work Practice** may be offered by the School. Students should consult the School for course offerings listed under selected topics in a given semester.

**5322 Community Development** emphasizes theory and practice of Community Organizing (CO) and Community Development (CD). Ethical dilemmas, legitimacy, accountability and the roles and responsibilities of the worker are examined. Urban, rural and cultural differences are considered in pursuit of the role of effective organizing and development work.

PR: SCWK 4300 and 4320

**5323 Social Work With Groups** focuses on the group as a primary unit of

analysis and intervention. Group work practice is examined from a variety of orientations, including therapy, self-help, and organization groups. Students are expected to participate in structured group experiences.

PR: SCWK 4300 and 4320

**5324 Selected Topics in Social Work Practice** may be offered by the School. Students should consult the School for course offerings listed under selected topics in a given semester.

**5325 Family Counselling and Therapy** prepares students to offer direct service to families and to maintain a family focused practice in a variety of settings. Assessment and intervention skills, and family therapy concepts are addressed. Emphasis is given to nuclear, divorced, blended, and single parent family structures.

PR: SCWK 4300 and 4320

**5326 Selected Topics in Social Work Practice** may be offered by the School. Students should consult the School for course offerings listed under selected topics in a given semester.

**5327 Interdisciplinary Course on Family Violence** (same as Nursing 5327) focuses on physical, emotional, and sexual violence throughout the life cycle of the family. Issues of family violence will be addressed using an interdisciplinary framework with emphasis on understanding the nature and impact of family violence, incorporating gender and socio-cultural analysis. Emphasis will be given to causal explanations, common patterns, and short and long-term effects of abuse and on the roles of health professionals in prevention and treatment.

CR: Nursing 5327

PR: SCWK 4300 or Nursing 3001 and Nursing 3501, or consent of instructor

**5328 Social Work Practice in Child Abuse: From Protection to Prevention** further develops the student's knowledge and skills necessary for prevention, assessment, crisis intervention, apprehension, family reunification, community consultation and community response, in the interest of child protection. Content includes research and best practices informing policy, assessments and standards of practice related to child maltreatment, with special reference to: child sex abuse, physical abuse, emotional neglect and abuse, physical and medical neglect, exploitation, inadequate caretaking, and exposure to violence. This course may include a skills testing component.

PR: SCWK 4300

**5329 Biopsychosocial Assessment in Addictions** - inactive course

**5420 Social Work Research and Evaluation: Collecting and Analyzing Data** - inactive course

**5421-5429 Selected Topics in Social Work Research** may be offered. Students should consult the School for course offerings listed under selected topics in a given semester.

**5520-5521 Selected Topics in Health and Social Policy**

**5522 Feminist Perspectives on Policy and Practice** examines social policies and social services as they affect women in our society. Specific emphasis is placed on women as providers and consumers of social services. Issues related to feminist practice are examined.

CR: the former SCWK 5122

**5523 International Social Welfare**

CR: the former SCWK 5121

**5524-5529 Selected Topics in Health and Social Policy**

**5610-5612 Selected Fields of Practice**

**5613 Social Work in Mental Health** provides an overview of the field of Mental Health. Social Work responsibilities are examined in relation to formal and informal mechanisms that bear on an individual's entry into mental illness, explanations of mental illness, the role of institutions, types of treatment, community mental health advocacy and return to the community.

PR: SCWK 3320, 3321, and 3421

**5614 Social Work in Rural Newfoundland and Labrador** examines the practice of rural and northern social work from the perspective of rural Newfoundland and Labrador. The practice of social work in rural and northern communities requires a unique adaptation of social work theory and practice. Due to the limited resources in isolated communities the social worker or human service professional is called upon to utilize specific social work skills.

PR: SCWK 3320, 3321, 3421

**5615-5619 Selected Fields of Practice**

**5720 Seminar on Professional Issues and Interdisciplinary Practice** is an integrative study of current professional trends and issues in contention. Dilemmas and tasks in professionalism; such as, contending values; relations among disciplines.

PR: SCWK 4300

**5820-5829 Directed Readings** may be given to senior students to pursue individual studies not duplicative of other studies. PR: consent of Director

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# SCHOOL OF GRADUATE STUDIES

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**Dean**

C.R. Jablonski (Chemistry), B.Sc. *Mass.*, Ph.D. *Calgary*, F.C.I.C.;  
Winner of President's Award for Outstanding Research, 1984-  
1985

**Assistant Registrar (Graduate) Development Officer**

N. Parsons, B.Sc., B.Ed., M.Ed., M.B.A. *Memorial*

**Administrative Staff Specialist**

N. Fagan

**Associate Dean**

N. Golfman (English), B.A. *Alberta*, M.A., Ph.D. *Western Ontario*

## 1 General Information and Regulations Governing All Graduate Students

The graduate degrees of Doctor of Philosophy, Master of Applied Social Psychology (Co-operative), Master of Applied Statistics, Master of Arts, Master of Business Administration, Master of Education, Master of Engineering, Master of Music, Master of Nursing, Master of Philosophy, Master of Physical Education, Master of Science, Master of Science in Kinesiology, Master of Science in Medicine, Master of Science in Pharmacy, and Master of Social Work are awarded by the University. Graduate diplomas are offered in Community Health and Clinical Epidemiology Research, Fisheries Resource Management, Post Secondary Studies (Health Professional Education) and Post Masters Nurse Practitioner.

Interdisciplinary study is encouraged by the University, and prospective applicants should make enquiries about their interests from all the areas of study concerned. Interdisciplinary programs offered are: Master of Applied Science (Computer Engineering, Environmental Engineering and Applied Science, and Environmental Systems Engineering and Management), Master of Arts and Doctor of Philosophy in Ethnomusicology, Master of Employment Relations, Master of Environmental Science, Master of Marine Studies, Master of Oil and Gas Studies, Master of Science (Aquaculture), Master of Science (Computational Science), Master of Science (Computational Science - Co-operative), Master of Science (Environmental Science), Master of Science and Doctor of Philosophy (Cognitive and Behavioural Ecology), Master of Philosophy (Humanities), and Master of Women's Studies.

Note: *Every candidate in graduate studies shall comply with the GENERAL REGULATIONS, the Degree Regulations and any additional requirements of the appropriate Department.*

### 1.1 Definition and Explanation of Terms Used in this Calendar

#### 1.1.1 Special/Selected Topics Courses

Where a block of courses has been approved under a general heading such as selected topics, special areas, directed readings or like heading, each new course offered from that block of courses shall be approved in advance by the Faculty/School Council (or delegated Graduate Studies Committee). To ensure an orderly use of the courses and non-duplication between course numbers, titles and contents, the Council (or Committee) shall require the same quality and type of information as is needed for the approval of a regular course. (*Consult the School of Graduate Studies or Deputy Registrar for administrative procedures.*)

#### 1.1.2 Dean of Graduate Studies

In all regulations following, reference to "the Dean" refers specifically to the Dean of Graduate Studies.

#### 1.1.3 Credit Hour

A credit hour is the measure used to reflect the relative weight of a given course towards the fulfilment of appropriate degree, diploma, certificate, major, minor, or other program requirements. Normally, a course has a credit value of 3 credit hours. A weight of one credit hour normally means that the course meets for lectures one hour per week for the duration of a semester or two hours per week for the duration of a session. The number of hours of required instruction, outside of lecture time, such as laboratory instruction, tutorials, etc. may or may not impact on the number of credit hours assigned to a particular course and academic units may recommend to the Senate a greater or lesser whole number of credit hours for a particular course.

#### 1.1.4 Graduate Course

1. A graduate course comprises a unit/units of work in a particular subject normally extending through one semester, the completion of which carries credit toward the fulfilment of the requirements for a postbaccalaureate degree, diploma or certificate.
2. Accelerated courses are not normally permissible in graduate programs.
3. Courses required as part of a graduate student's program are known as program courses. Tuition for such courses is covered by the semester fee.
4. Courses which are not required as part of a graduate student's program are known as non-program courses. Students registering for such courses will be required to pay the appropriate per-course fee.

#### 1.1.5 Policy Governing the Auditing of Courses

1. In order to audit any course, an individual must receive permission from the instructor in that course, the supervisor/advisor and the administrative head of the unit in which the course is offered. Matters to be considered shall include class size, impact on students registered for credit and other factors judged relevant by the academic unit; and permission cannot be given until the number of registrations for credit is known.
2. Individuals auditing courses shall limit their participation to that deemed appropriate by the instructor; auditors are not permitted to write formal examinations, nor to have their work formally assessed.
3. Students who require a testamur of audition may request the same from the instructor of the course. Students will not register for audit courses nor will a record of audit courses appear on students' transcripts.

#### 1.1.6 Semester

A semester means a period of approximately 14 consecutive weeks during which the University is in regular session and in which period there are at least 12 teaching weeks as defined by the Senate. Normally the Fall semester commences in early September, the Winter semester in early January, and the Spring semester in early May.

#### 1.1.7 Academic Year

The academic year is from September 1 of one year to August 31 of the following year.

### 1.1.8 Graduate Student

A graduate student is one who has been admitted to a graduate degree or a graduate diploma program.

A full-time graduate student is one who registers as such, devotes full time to his or her academic program and may not commit more than 24 hours a week working time, including teaching assistant or research assistant duties, to matters other than the degree program.

A part-time graduate student is one who is registered for the duration of a semester and is not classified as full-time.

### 1.1.9 Visiting Research Student

1. A student who is registered in good standing in a graduate program at another recognized institution who comes to Memorial University of Newfoundland to conduct research under the supervision of Memorial University of Newfoundland faculty members is considered to be a visiting research student. In order to obtain access to University resources, and where applicable, a study permit, such a student will be required to register each semester of their visit for GRAD 9900 using a Course Change Form.
2. To be eligible to register, a visiting research student must submit an Application for Admission form to the School of Graduate Studies, accompanied by: a) a letter from their home institution verifying graduate student status, and b) a letter from the host faculty member confirming the duration of the visit. The student will then be admitted to the School of Graduate Studies to a "non-degree" program.
3. Visiting research students will be exempt from tuition fees. However, all international students will be required, as a condition of registration, to purchase health insurance (contact the International Student Advisor). If a visiting research student wishes to register for a course while at Memorial University of Newfoundland, s/he must meet the University admission requirements and pay the undergraduate per course fee (see *Fees and Charges section of the University Calendar*).

Note: A student enrolled in a graduate program at another university who wishes to complete courses at Memorial University of Newfoundland for transfer of credit to his/her home institution is not considered to be a Visiting Research Student under this definition. Such students should apply to the Office of the Registrar for admission to the University, and if admitted, will be governed by **GENERAL ACADEMIC REGULATIONS**. Fees will be assessed in accordance with the fee schedule for undergraduate courses (see *Fees and Charges section of the University Calendar*).

### 1.1.10 Program

1. A program, whether it comprises courses only, courses and comprehensive examination, or courses, internship, project, thesis research, paper folio is defined for each graduate student in accordance with Departmental and University Regulations. Each program of study is recommended by the appropriate academic unit, and must be approved in writing by the Dean of Graduate Studies before the beginning of the graduate student's second year of study.
2. Responsibility for the administration of the program shall rest with the Dean acting on behalf of the School.

Note: The following general statements concerning admission and degree requirements should be supplemented by the detailed regulations governing each program.

## 1.2 General Regulations

### 1.2.1 Qualifications for Admission

#### 1.2.1.1 Graduate Diploma Programs

To be considered for admission to a Graduate Diploma program, the minimum requirements will normally be a second-class degree from a university of recognized standing, in an appropriate area of study.

A candidate admitted to a Graduate Diploma program, who has demonstrated to the satisfaction of the Faculty/School/Department concerned their ability to pursue research at the master's level, may be permitted subsequently to transfer his/her candidature to that of a master's in the affiliated program area and will thereafter be awarded only the master's at the end of his/her candidature.

#### 1.2.1.2 Master's Program

To be considered for admission to a Master's program, the minimum requirements will normally be a second class degree from a university of recognized standing, in an appropriate area of study.

#### 1.2.1.3 Ph.D. Program

To be considered for admission to a Ph.D. program, the minimum requirements will normally be a Master's degree from a university of recognized standing, in an appropriate area of study.

Other students may be considered for admission to a Ph.D. program provided that:

1. they have been registered in a Master's program for a minimum of 12 months, and have demonstrated to the satisfaction of the Faculty/School/Department concerned their ability to pursue research at the Doctoral level. Such transfer should take place no later than the 5th semester of the student's Master's program. (See **UNIVERSITY REGULATIONS - Fees and Charges**); or
2. they hold a Bachelor's degree with Honours, or equivalent, from a university of recognized standing, and that the Faculty/School/Department is satisfied of the students' ability to pursue research at the Doctoral level.

#### 1.2.1.4 Applicants Not Meeting Qualifications

Only in exceptional circumstances, and only upon the recommendation of the Faculty/School/Department concerned, will the Dean consider applicants who do not meet the requirements in 1. or 2. above.

#### 1.2.1.5 English Proficiency Requirements

Since English is the primary language of instruction at this University, all applicants seeking admission to the School of Graduate Studies must possess an adequate knowledge of written and spoken English as a prerequisite to admission. Regardless of country of origin or of citizenship status, applicants will be required to demonstrate proficiency in the English language. This demonstration may take one of the following forms:

1. Successful completion of the equivalent of three years of full-time instruction in an English language secondary institution as recognized by Memorial University of Newfoundland including successful completion of at least two courses in English Language and/or Literature at the Grade XII (or equivalent) level. Please note that these courses must be other than English as a Second Language (E.S.L.) courses.
2. Successful completion of a baccalaureate degree from a recognized University where English is the language of instruction and from

which transfer of credit may be allowed by Memorial University of Newfoundland.

3. Successful completion of a post-graduate degree program at a recognized University where English is the language of instruction and from which transfer of credit may be allowed by Memorial University of Newfoundland.
4. Submission of official results of the Test of English as a Foreign Language (TOEFL) with a paper-based score of 550 (or higher)/computer-based score of 213 (or higher) or Internet-based with a score of 80 (or higher) and the Test of Written English (TWE) with a score of 4 (or higher).
5. Submission of the official results of the Michigan Test of English Proficiency with a score of 85% (or higher).
6. Submission of the official results of the English Language Testing Service (ELTS) Test with a score in Band 7 (or higher).
7. Submission of official results of the Carleton Academic English Language (CAEL) Assessment with a minimum score of between 50 and 60 in each of four bands, with at least 2 band scores of 60.
8. Submission of official results of the Canadian Test of English for Scholars and Trainees (CanTEST) with a Band Level 4.5 in the listening comprehension and reading comprehension sub-tests and a score of 4 in writing.
9. Only in exceptional circumstances and only upon the recommendation of the Department/Faculty/School concerned, will the Dean consider applicants who do not meet one of the requirements listed in 1-8 above.

#### 1.2.1.6 Additional Requirements

Particular Departments/Faculties/Schools may require greater strength in English communicative skills than is indicated by the achievement of minimum scores outlined in 4., 5., 6., 7., and 8. above. Any such additional requirements are detailed in the appropriate section of the Calendar.

#### 1.2.1.7 English Language Requirements Subsequent to Admission

1. Students who have been admitted under **English Proficiency Requirements**, Clauses 4. - 8. above, will be required to take an English language placement test on arrival at Memorial University of Newfoundland. On the basis of the test results, students may be required to complete successfully a course of language study designed to bring their English, in any or all of listening, speaking, reading, and writing, to a level required for graduate studies. A final assessment of the students' proficiency in these areas will normally be made no later than the end of the third semester following their first registration in the School of Graduate Studies. As a result of this assessment, and in consultation with the student's academic unit and the Department of English Language and Literature, there may be a recommendation for termination of the student's program.
2. Notwithstanding **Additional Requirements** above, if a student's department is not satisfied with the student's ability to communicate in English, then the student may be required to complete successfully the relevant component(s) of the course of study referred to in **Additional Requirements**. The department will be required to take this action within three semesters of the student's admission to a graduate program. At the end of this period the department may recommend, but not require this procedure.

Note: *Information regarding the TOEFL program is available from the Educational Testing Service, Box 899, Princeton, New Jersey, U.S.A., 08540; from U.S. embassies or consulates, or from offices of the U.S. Information Services. Information on the Michigan Test of English may be obtained from the Testing and Certificate Service, University of Michigan, 2001 North University Building, Ann Arbor, Michigan, U.S.A. Information regarding the ELTS Test is available from the offices of the British Council, 10 Spring Gardens, London, SW1A 2BN, England.*

#### 1.2.1.8 Foreign Degree Transcripts

Students who have completed undergraduate programs at universities which issue documents in languages other than English or French shall submit notarized English translations of all supporting documentation, including, but not limited to, transcripts, degrees, and diplomas.

### 1.2.2 Procedure for Admission

1. Application for admission to graduate studies must be made either online or on the appropriate form in duplicate to the School of Graduate Studies. The application must be supported by an official transcript of the applicant's university record. If the applicant is a graduate of another university or college, a copy of the Calendar of that institution must be included upon request.  
Most graduate programs have September start dates; however, some programs accept students for January and/or May admission. Deadlines for submission of applications can be as early as November for the following September; therefore, applicants should inquire about program start dates and application deadlines of the academic program of interest (see [www.mun.ca/sgs](http://www.mun.ca/sgs)). Non-Canadian applicants should allow four to six months for processing of official documents with Immigration authorities.
2. Admission to graduate studies shall be upon acceptance by the Dean after assessment of the qualifications of the applicant but no candidate will be admitted unless the academic unit of specialization recommends acceptance along with a proposed program of study and a proposed supervisor or advisor or, where appropriate, a tutor. Successful applicants will be notified by the Dean of Graduate Studies.
3. The applicant may be required to appear for an interview before a final offer of admission is made.
4. It is recommended that the applicant refer to the appropriate section of this Calendar to ascertain if additional testing information or documentation is required when making initial application, e.g. in Social Work, Business Administration, Engineering and Applied Science, History.
5. The University reserves the right to refuse admission to any applicant.

### 1.2.3 Registration

#### 1.2.3.1 Program Registration

1. All graduate students must be registered in each semester for the graduate program registration appropriate to their discipline (see note) until all academic requirements for the degree have been met, except during periods for which leaves of absence have been granted (see **Leaves of Absence**).

Note: *e.g. Linguistics 9000, Chemistry 9000 or, in the case of Medicine, Medicine 9900.*

2. A student registered in a graduate diploma, Master's or Ph.D. program may not concurrently pursue studies leading to any other degree without the prior approval of the Dean.

#### 1.2.3.2 Program Withdrawal

Students intending to withdraw from their program must inform the Dean of Graduate Studies in writing. The period of withdrawal from a program without incurring liability for that semester's fees is three weeks after the first day of lectures in the semester in question, as

stated in the University Diary. Requests received after the end of the regular registration period, and approved, will be charged an administration fee (see Fees and Charges).

### 1.2.3.3 Course Registration

Note: *For interdisciplinary programs, the Head of the academic unit is the Dean or Director of the Faculty/School administering the program.*

1. Students will register for courses at the times indicated in the University Diary.
2. Students not admitted to a graduate program may enroll in graduate courses with the permission of the Head of the appropriate academic unit.

### 1.2.3.4 Changes in Course Registrations

Note: *For interdisciplinary programs, the Head of the academic unit is the Dean or Director of the Faculty/School administering the program.*

1. Within two weeks following the first day of lectures in any semester, as stated in the University Diary, a graduate student may, upon the approval of the appropriate Head of academic unit, add a course or courses to his or her registration for that semester.
2. Within seven weeks after the first day of lectures in any semester, as stated in the University Diary, a graduate student may, upon the approval of the appropriate Head of academic unit, drop a course or courses from his or her registration for that semester without prejudice.
3. After the period described in 2. above has expired, and up until the last day of lectures, any student who is prevented from completing a course by illness, bereavement or other acceptable cause, duly authenticated in writing may, upon the recommendation of the Head of the appropriate academic unit, drop that course without academic prejudice.

Note: *A course cannot be dropped after the last day of lectures without the approval of the Dean of Graduate Studies.*

### 1.2.3.5 Period of Study

1. Each student in graduate studies shall spend such time in the program as decided by the academic unit of specialization and approved by the Dean, and be subject to the following minimum residency.
  - a. Except where provided for elsewhere in this calendar, each student for a Master's degree shall normally spend at least two semesters in residence as a graduate student at this University.
  - b. Except where provided for elsewhere in this calendar, each student for a Ph.D. shall normally spend at least three semesters in residence as a graduate student at this University.  
 To be resident as a graduate student of this university a student must be registered as a graduate student at Memorial University of Newfoundland and participate in a community of learners and instructors (formally or informally) who are joined together by the practices and standards of a profession or an academic discipline. For most students this will involve taking courses or engaging in research while resident on campus. These attributes may, however, be found elsewhere and it is possible therefore that the residency requirement may be satisfied in an off campus location. In such cases the Dean of Graduate Studies must be satisfied that the attributes are met.
  - c. Except where provided for elsewhere in this calendar, each student for a graduate diploma shall normally spend at least one semester in residence as a graduate student at this University.
2. The maximum period of a graduate program shall be seven years beyond first registration.

### 1.2.3.6 Leaves of Absence

1. General
  - a. A leave of absence is a period of time during which a student is not required to register; no fees are assessed; and the time granted is not counted in the maximum time period permitted for a graduate program (see **Period of Study**).
  - b. In the event that circumstances prevent a student from pursuing his/her program, the student may apply to the Dean of Graduate Studies for a leave of absence.
  - c. A student may normally apply for only one leave of absence during his/her program. The maximum leave of absence shall normally not exceed 12 months.
  - d. An application for leave will normally be made before the end of the registration period in the first semester for which leave is requested. Requests received after the end of the regular registration period, and approved, will be charged an administration fee (see Fees and Charges).
2. Parental  
 A student may apply for a leave of absence in the case of pregnancy/birth/adoption of a child. (Such leave will be considered separately from 1.c. above).

## 1.2.4 Program Requirements

Note: *Every candidate shall complete a program of study as recommended by the Head of the academic unit, in consultation with the Supervisory Committee and approved by the Dean of Graduate Studies. See **Procedure For Admission**, Clause 2.*

### 1.2.4.1 Graduate Diploma and Master's Programs

1. Candidates should consult the appropriate Degree and Department/Faculty/School regulations for information concerning the specific program requirements.
2. Graduate diploma programs shall not normally comprise more than 50% of the master's in the same area.

### 1.2.4.2 Ph.D. Program

1. Each candidate is required to pass a comprehensive examination (see **Comprehensive Examinations, Ph.D. Comprehensive Examination**).
2. Each candidate shall present a thesis embodying the results of original research.
3. Candidates should consult the appropriate Department/Faculty/School regulations for information concerning the number and specific credit hours that may be required for a program.
4. Candidates may pursue a specified part of their research elsewhere provided that prior permission has been obtained from the Dean on the recommendation of the Head of the academic unit in consultation with the Supervisory Committee.

#### 1.2.4.3 English Writing Requirement

Given the analytical and scholarly demands of study at the graduate level, graduate students are expected to demonstrate an advanced facility with written English in meeting the demands of their coursework and, where applicable, in the writing of any end-of-program research report, folio, comprehensive examination, or thesis.

#### 1.2.4.4 Changes in Programs

Any changes in the candidates's program of studies must be approved by the Dean of Graduate Studies on the recommendation of the appropriate academic unit.

#### 1.2.4.5 Research Involving Animals

The Animal Care Unit offers a seminar in animal care at least once annually. The seminar is administered by the School of Graduate Studies. All graduate students whose degree requirements involve experimentation on living vertebrate animals are required to attend this seminar normally at the first offering following commencement of their program.

#### 1.2.4.6 Graduate Research Integrity Requirement

All graduate students are required to complete the Graduate Research Integrity Program (GRIP), which is administered by the School of Graduate Studies and offered annually in the Winter semester. Successful completion of GRIP is normally required in the first offering following program commencement and will be annotated on the student's transcript.

#### 1.2.4.7 Year of Degree and Departmental Regulations

1. A student completing a graduate degree program in the School of Graduate Studies will follow the degree and Faculty/School/Department regulations in effect in the year in which the student first registers for his/her current program. However, students may elect to follow regulations introduced subsequent to their initial registration.

*Note: The foregoing notwithstanding, in the case of students who have submitted a thesis/report/folio, or students in a non-thesis program who have taken a comprehensive examination, the option of changing regulations is no longer available.*

2. When there is doubt as to which degree or departmental regulations may be followed, the Academic Council of the School of Graduate Studies will decide which are the appropriate regulations.
3. Notwithstanding these guidelines, the University may place limits on the time permitted to complete a program under any given set of regulations. In addition, detailed scheduling of courses and/or work periods may be changed as the University deems appropriate or necessary.

#### 1.2.4.8 Transfer of Course Credits

All such transfers require the approval of the Dean of Graduate Studies, on the recommendation of the head of the appropriate academic unit.

1. A student who has successfully completed graduate courses at Memorial University of Newfoundland prior to admission to a graduate program may apply to transfer appropriate courses to that program, provided such courses have not been used to satisfy other degree requirements.
2. A student who has successfully completed graduate courses as part of one graduate program at Memorial University of Newfoundland, and who is subsequently admitted to another program, may apply to transfer appropriate courses to the current program, provided such courses have not been used to satisfy other degree requirements.
3. A student who has successfully completed graduate courses at another institution recognized by Senate may, on admission to a graduate program at Memorial University of Newfoundland, apply to transfer appropriate courses to the current program, provided such courses have not been used to satisfy other degree requirements.
4. Students who successfully complete a graduate diploma program may transfer the course credits earned in that program towards a master's degree if these credits meet the requirements of the master's in the affiliated area in which the graduate diploma was granted.

Affiliated Master's programs for graduate diploma programs currently offered by the School of Graduate Studies are as follows:

##### **Medicine**

Graduate Diploma in Clinical Epidemiology Research - Master of Science in Medicine (Clinical Epidemiology)

Graduate Diploma in Community Health - Master of Science in Medicine (Community Health)

##### **Education**

Graduate Diploma in Post Secondary Studies (Health Professional Education) - Master of Education (Post Secondary Studies)

##### **Marine Studies**

Graduate Diploma in Fisheries Resource Management - Master of Marine Studies (Fisheries Resource Management)

5. In programs requiring a minimum of 12 credit hours or more, transfer of credit hours in graduate courses referred to in 1, 2, and 3 above shall not exceed 30% of the total number of credit hours required. In programs requiring fewer than 12 credit hours, a maximum of 3 credit hours in graduate courses referred to in 1., 2., and 3. above shall be considered eligible for transfer.
6. Graduate courses referred to in 1., 2., 3., and 4. above shall not be considered eligible for transfer if they have been completed more than seven years prior to the date of admission into the current program.

### 1.2.5 Provision for Waiver of Regulations

Academic regulations notwithstanding, the University reserves the right in special circumstances, to modify, alter or waive any regulation in its application to individual students where, in the judgement of the appropriate University Officer or Committee, there is sufficient justification for doing so.

1. Waivers of course prerequisites/co-requisites may be granted by the Head of an academic unit.
2. Waivers of departmental regulations may be granted by the Dean of Graduate Studies on the recommendation of the Head of an academic unit.
3. Requests for waiver of a degree or general regulation must be submitted to the Academic Council of the School of Graduate Studies.

### 1.2.6 Appeals Procedures

Students have the right to appeal against decisions of the Head of an Academic Unit, the Dean or Academic Council. Appeals must be made in writing clearly stating the basis for the appeal and should be directed as follows:

1. Appeals against decisions of the Head of an Academic Unit will be made directly to the Dean of Graduate Studies.
2. Appeals against decisions of the Dean may be made to the Academic Council, School of Graduate Studies. Letters of appeal should be directed to the Chair of the Appeals Committee, c/o School of Graduate Studies.
3. Appeals against decisions of the Executive Committee of the Academic Council may be made to the Academic Council, School of Graduate Studies. Letters of appeal should be directed to the Chair of the Appeals Committee, c/o School of Graduate Studies.
4. Appeals against decisions of Academic Council may be made to the Senate of the University. Letters of appeal should be directed to the Secretary of Senate, c/o Office of the Registrar.

Note: *Students whose appeals are denied will be advised in the letter of denial of the next avenue of appeal that may be taken. Should a student's appeal be denied by the Senate, he/she will be advised that, within the University, no further appeal is possible. For assistance in the appeals process, students are advised to consult with the Office of the Registrar, regarding appeals to Senate.*

### 1.2.7 Evaluation

Note: *For interdisciplinary programs, the Head of the academic unit is the Dean or Director of the Faculty/School administering the program.*

#### 1.2.7.1 Evaluation Methods and Grading

1. Students shall write their examinations in graduate courses at a time to be determined by the Head of the academic unit on the recommendation of the Faculty member(s) concerned.
2. A written copy of the course outline, including method of evaluation in the course shall be provided to each student in the course as early as possible, and in any case not later than two weeks after the start of the course.
3. The final evaluation submitted to the Registrar shall consist of one of the following letter grades with the appropriate numerical equivalent:

Letter Grades	Numeric Grades	Points Per Credit Hour
A	80-100%	4
B	65-79%	3
C	55-64%	2
D	50-54%	1
F	below 50%	
PWD (pass with distinction) - indicates excellent performance	no numeric grade	not applicable
PAS (pass) - indicates performance meets expectations	no numeric grade	not applicable
FAL (fail) - indicates failing performance	no numeric grade	not applicable
DR (drop) - drop without academic prejudice	no numeric grade	not applicable
DRF (drop fail) - drop with academic prejudice	0%	
ABS (absent) - absent for acceptable cause	no numeric grade	not applicable
INC (incomplete) - incomplete pending final grade	no numeric grade	not applicable

4. Supplementary examinations are not permitted.

#### 1.2.7.2 Evaluation of Graduate Students

1. Failure to attain a final passing grade of A or B in a program course shall lead to termination of a student's program unless:
  - a. the regulations for a particular degree allow the student to repeat the course. Only one such repeat will be permitted in a student's program. Failure to obtain a grade of A or B in the repeated course shall lead to termination of the student's program.
  - b. the Dean of Graduate Studies approves a repeat of the course, upon the recommendation of the Supervisor and the Supervisory Committee supported by the Head of the Academic Unit, where 1.a. above does not apply. Such recommendations must provide sufficient grounds for a repeat. Only one such repeat will be permitted in a student's program. Failure to obtain a grade of A or B in the repeated course shall lead to termination of the student's program.

Note: *In exceptional circumstances, the Dean of Graduate Studies may approve a substitute course in place of the repeat upon the recommendation of the Supervisory Committee and Supervisor supported by the Head of the Academic Unit. Failure to obtain a grade of A or B in the substituted course shall lead to termination of the student's program.*

2. Failure in a non-program course will not normally result in termination of a student's program.
3. The Supervisor and the Supervisory Committee may recommend that a candidate be required to withdraw from the program, if after consultation with the candidate, the candidate's non-course work is deemed to have fallen below a satisfactory level.
4. When departmental requirements for a degree requires an examination of a candidate's reading knowledge of a language(s) other than English, the examination shall be set and marked by the appropriate language department, or by an authority as determined by the Head of the academic unit and Dean. The results of the examination will be transmitted to the candidate by the Dean.

#### 1.2.7.3 Deferral of Examinations

1. Graduate students who are prevented by illness, bereavement or other acceptable cause, duly authenticated, from writing final examinations may apply, with supporting documents within one week of the original examination date to the appropriate head of the academic unit to have their examinations deferred.
2. The Department's decision, including information on the appeals route open to the student in the case of a negative decision, must be communicated in writing to the student and to the Dean of Graduate Studies within one week of the receipt of the student's complete application.



3. In those cases where the Department accepts the extenuating circumstances the student may be permitted to write a deferred examination or, with the consent of both the Department and the student, the grade submitted may be based on term work alone.
4. An interim grade of "ABS" will be assigned by the academic unit in the case of a student granted a deferred examination. This grade will be replaced by the final grade which must be received by the Office of the Registrar within one week following the commencement of classes in the next academic semester or session.
5. Students who are prevented by illness or bereavement or other acceptable cause, duly authenticated, from writing a deferred examination, may apply, in writing, with supporting documents within one week of the scheduled date of the deferred examination to the appropriate Department Head to have the examination postponed to a time not later than the last date for examinations in the semester following that in which the student was enrolled in the course.
6. The Department's decision, including information on the appeals route open to the student in the case of a negative decision, must be communicated to the Registrar, to the student and to the Dean of Graduate Studies within one week of the receipt of the student's complete application.

#### 1.2.7.4 Incomplete Grades/Change of Grade

1. For good cause a grade of "Incomplete" may, with the approval of the appropriate department or academic unit, be submitted. This "Incomplete" grade shall, however, be valid only for one week following the commencement of classes in the next academic session as stated in the University Diary. In the event that a mark has not been received by the Registrar within the prescribed deadline, the "Incomplete" grade shall be changed to "0 F".
2. Clause 1. notwithstanding, for acceptable cause an extension of time not exceeding the end of the semester following that in which the "Incomplete" was given may be permitted by the Head of the academic unit. "Acceptable cause" in these cases must be duly authenticated and will be illness, bereavement, serious problems of a personal nature or the like.
3. Changes in grades for graduate courses must be submitted on the appropriate form, which must be signed by the course instructor and approved by the Head of the appropriate academic unit who will submit such changes to the Registrar.

Note: A grade of less than 65% cannot be changed without the approval of the Dean of Graduate Studies.

#### 1.2.7.5 Re-Reading of Examination Papers

1. Students may apply to have a final examination paper re-read whether or not they have obtained a passing grade in that course.
2. Students who wish to have a final examination paper re-read must make written application to the Registrar enclosing a fee of \$50.00 per paper within one month of the release by the University of the grade reports. If the mark is raised after re-reading, the fee is refunded. If the mark is unchanged or lowered, the fee is forfeited.

### 1.2.8 Comprehensive Examinations

#### 1.2.8.1 Master's Comprehensive Examination

1. The composition of the Comprehensive Examination Committee is specified in the degree and departmental regulations, and the Committee is appointed by the Dean. The Dean of Graduate Studies or delegate may exercise the right to attend. All members of the Committee including the Chairperson, but excluding the Dean of Graduate Studies, shall be voting members.
2. In this examination the candidates must demonstrate an advanced knowledge of the academic discipline as defined by the academic unit in which they are students. Therefore, in order to be eligible to sit the examination, all course requirements must be completed.
3. Members of the Comprehensive Examination Committee shall decide the results of the comprehensive examination as indicated in a.-d. below:
  - a. The category of "pass with distinction" will be awarded to candidates who demonstrate superior knowledge of their chosen field. This category requires unanimous support of the Comprehensive Examination Committee.
  - b. The category of "pass" will be awarded to candidates who demonstrate an acceptable knowledge of their chosen area and requires a simple majority vote.
  - c. The category of "re-examination" selects those candidates with an understanding of their research area that lacks sufficient depth and scope as indicated by a simple majority of the Comprehensive Examination Committee. Only one such re-examination is possible and students in this category are not eligible for the award of "pass with distinction". If a re-examination is to be held, it must be conducted not less than one month and not more than six months after the first examination. The decision of the voting members of the Committee following this re-examination can only be "pass" or "fail" decided by simple majority. Failure will lead to immediate termination of the candidate's program. There is no option for further re-examination.
  - d. Students awarded a "fail" are deemed, by unanimous vote of the Comprehensive Examination Committee, to be unable to demonstrate an adequate understanding of their research area. The candidate's program is terminated.
4. The Chairperson of the Comprehensive Examination Committee shall report to the Head of the academic unit who shall report to the Dean. The result of the comprehensive examination(s) shall be reported to the candidate by the Dean.

#### 1.2.8.2 Ph.D. Comprehensive Examination

1. The candidate shall submit to a comprehensive examination, which may be written or oral or both as determined by the academic unit. Candidates shall normally take the examination no later than the end of the seventh semester in the doctoral program. Unless an extension is approved by the Dean of Graduate Studies, failure to take the examination at this time will result in the termination of the candidate's program.
2. This examination, whether written or oral, shall be conducted by a Committee appointed by the Dean of Graduate Studies on the recommendation of the academic unit. It shall consist of the Head of the academic unit (or delegate) who shall be the Chairperson, the candidate's supervisor [or, where a supervisor has not yet been appointed, the Graduate Officer or chair of the Graduate Studies (or equivalent) Committee], the Dean of Graduate Studies (or delegate), and at least three other members, the total voting members to be an odd number. All members of the Committee including the Chairperson, but excluding the Dean of Graduate Studies, shall be voting members.
3. In this examination, the candidate must demonstrate a mastery of those sub-disciplines appropriate to his/her research area, as defined by the academic unit in which they are students. Those sub-disciplines upon which the candidate will be examined should be made known to the candidate no later than three months prior to the examination. The candidate must further be able to relate the specialization of his/her research to the larger context of these sub-disciplines.
4. Members of the Comprehensive Examination Committee shall decide the results of the comprehensive examination as indicated in a-d below:

- a. The category of "pass with distinction" will be awarded to candidates who demonstrate superior knowledge of their chosen field. This category requires unanimous support of the Comprehensive Examination Committee.
  - b. The category of "pass" will be awarded to candidates who demonstrate an acceptable knowledge of their chosen area and requires a simple majority vote.
  - c. The category of "re-examination" selects those candidates with an understanding of their research area that lacks sufficient depth and scope as indicated by a simple majority of the Comprehensive Examination Committee. Only one such re-examination is possible and students in this category are not eligible for the award of "pass with distinction". If a re-examination is to be held, it must be conducted not less than one month and not more than six months after the first examination. The decision of the voting members of the Committee following this re-examination can only be "pass" or "fail" decided by simple majority. Failure will lead to immediate termination of the candidate's program. There is no option for further re-examination.
  - d. Students awarded a "fail" are deemed, by unanimous vote of the Comprehensive Examination Committee, to be unable to demonstrate an adequate understanding of their research area. The candidate's program is terminated.
5. The Chairperson of the Comprehensive Examination Committee shall report to the Head of the academic unit who shall report to the Dean. The result of the comprehensive examination(s) shall be reported to the candidate by the Dean.

## 1.2.9 Supervision

### 1.2.9.1 Master's Candidates

Each Master's candidate shall be assigned a Supervisor by the Dean, on the recommendation of the Head of the academic unit, or the Dean of the faculty concerned.

### 1.2.9.2 Ph.D. Candidates

1. Each candidate shall be assigned a Supervisor by the Dean, on the recommendation of the Head of the academic unit or the Dean of the faculty concerned.
2. A Supervisory Committee shall be appointed for each candidate by the Dean. The Supervisory Committee shall consist of the Supervisor (co-supervisors) who shall act as Chair, and normally at least two other members. In no circumstances may the Committee membership be fewer than two members. The membership of the Committee shall be nominated by the Head of the department or the Dean of the faculty concerned, after consultation with the Supervisor and the candidate.
3. The Supervisory Committee shall forward its reports and recommendations to the Dean via the Head of the department or the Dean of the faculty concerned.
4. The functions of the Supervisory Committee shall be, *inter alia*,
  - a. to decide, in consultation with candidates, the program of study, the subject of research, and the title of the thesis, and to recommend these for approval to the Dean;
  - b. to monitor the candidate's progress in their course programs and their research;
  - c. to report at least annually to the Dean on the candidates' progress and, at the same time, to advise on their continuation in the program; and to make such other reports and recommendations about the candidates to the Dean as it may deem necessary.
  - d. to recommend to the Dean, after consultation with the candidates, necessary changes in the program of study, the subject of research, or the title of the thesis;
  - e. to recommend to the Head of the academic unit or Dean of the faculty the timing of the comprehensive examination;
  - f. to report to the Dean that the thesis is ready for examination by completing a Supervisor Approval Form, which is to accompany the thesis upon its submission to the School of Graduate Studies.
  - g. to recommend to the Dean suitable persons to act as members of the Thesis Examining Board.

### 1.2.9.3 Supervisory Reports

1. At least annually, the Supervisor, Supervisory Committee or the Department shall make evaluations of a student's progress in a program. Recommendations concerning continuation, amendment, or termination (see **Termination of a Graduate Program**) of a candidate's program, are sent to the Dean, who shall take appropriate action. Students shall be advised of the contents of this evaluation and the subsequent recommendation(s).
2. The Supervisor, Supervisory Committee or the Department, shall forward its reports and recommendations to the Dean via the Head of the academic unit or the Dean of the faculty concerned.

## 1.2.10 Theses and Reports

### 1.2.10.1 Thesis/Report Guide Supplement

The Thesis/Report Guide Supplement ([www.mun.ca/sgs/guidelines\\_intro.php](http://www.mun.ca/sgs/guidelines_intro.php)), approved by the Academic Council of the School of Graduate Studies, provides the details for the examination process, general form and style of the thesis/report, required forms, number of copies, etc., required under this regulation.

### 1.2.10.2 Submission

1. Candidates must submit the thesis/report at least four months before the University Convocation at which the award of the degree is expected (see University Diary in current edition of University Calendar for exact date). The School of Graduate Studies does not accept any responsibility for completing the prescribed procedure in time for the nearest Convocation unless theses or reports are submitted by the prescribed dates in any current academic year.
2. A thesis/report may not be submitted until the candidate has fulfilled:
  - a. All course requirements, if any
  - b. All language requirements, if any
  - c. The comprehensive examination, if required, and
  - d. All other academic requirements of the academic unit concerned.

### 1.2.10.3 Evaluation of Masters Theses and Reports

1. Final examiners for the thesis/report will be appointed by the Dean on the recommendation of the academic unit. There will be two

examiners for a Master's thesis. Examiners shall normally be those who have completed a graduate degree at the doctoral level, including a thesis, in the discipline or cognate area. Those serving as examiners shall not have been involved in the preparation of the thesis/report.

2. Examination of the thesis/report will result in one of the following recommendations by each examiner. The thesis/report is:
  - a. acceptable without modifications; or
  - b. acceptable, modifications are required but the thesis does not have to be re-examined\*; or
  - c. unacceptable. The thesis/report requires modification and re-examination\*\*; or
  - d. totally unacceptable - the thesis/report is failed.\*\*\*

\*Modifications may include corrections of typographical errors and errors in nomenclature, improvement in phrasing, or rewriting of sections of the thesis/report. Modifications may be indicated in the text or listed separately;

\*\*Modifications might include (but are not limited to) the rectification of one or more of the following deficiencies: (1) misinterpretation and/or misuse of the matter covered, omission of relevant materials, unfounded conclusions, illogicality of argument, improper analysis of data and the like; (2) bad writing, (3) unacceptable physical presentation. A detailed list of problems should be included with the report;

\*\*\*A detailed list of the reason(s) for failure must be included in the report.

3. If all examiners recommend that the thesis/report is totally unacceptable, then the thesis will be failed, and shall not be re-examined.
4. If an examiner recommends that the thesis/report is unacceptable, and this recommendation is accepted by the Dean, then the student may apply to the Dean for permission to resubmit the thesis for re-examination in one of the following ways:
  - a. to submit a modified thesis/report to the original examiners.
  - b. to submit a modified thesis/report to new examiners.
  - c. to submit the original thesis/report to an Examination Board to be appointed by the Dean.
5. If a thesis/report is re-examined, the candidate will not be awarded a pass unless all examiners find the thesis acceptable.
6. Under no circumstances may a thesis/report be re-examined more than once.

#### 1.2.10.4 Evaluation of Ph.D. Theses

Candidates for the degree of Doctor of Philosophy must submit a written dissertation deemed acceptable by the University, and demonstrate their ability to defend their work in a public oral examination. For this reason, the final decision on whether a candidate will be recommended for the award of the degree is made only at the conclusion of the oral examination (see **The Examination Process**).

##### 1. Responsibilities of the Thesis Examining Board

The work of each candidate will be assessed by a Thesis Examining Board. Its first responsibility is to determine whether the thesis successfully demonstrates the candidate's competence to undertake independent research work. The Board must be satisfied that the work contributes significantly to knowledge in the field of study; that the contribution is of high scholarly merit; that the candidate is aware of the pertinent published literature; that it is written in a satisfactory style; and that it is free from typographical and other mechanical errors. The second responsibility of the Board is to conduct a final oral examination of the candidate and to then recommend to the Dean of Graduate Studies whether the candidate should be awarded the degree.

##### 2. Composition of the Thesis Examining Board

The members of the Thesis Examining Board will be appointed by the Dean on the recommendation of the Head of the academic unit who will have consulted with the supervisory committee. The Board shall consist of four members. Normally these will be the candidate's supervisor (who serves on the Board in a non-voting capacity), two examiners from within the University, and one from outside the University. However, when circumstances warrant, a second external examiner may be substituted for one of the internal examiners with permission of the Dean. Examiners shall normally be those who have completed a graduate degree at the doctoral level, including a thesis, in the discipline or cognate area. Members of the supervisory committee other than the supervisor are ineligible for appointment to the Board. Those serving as examiners shall not have been involved in the preparation of the thesis/report.

##### 3. The Examination Process

- a. The voting members of the Board shall submit written reports on the thesis containing an assessment of the quality of the written work and a recommendation as to whether the candidate should be permitted to proceed to an oral examination and defence of the work. An examiner may recommend:
  - i. that the candidate be allowed to proceed to the oral defence of the thesis\*, or;
  - ii. that the candidate not be allowed to proceed to the oral defence at this time\*\*, or;
  - iii. that the candidate should be failed.

\*Any suggested corrections or revisions should be outlined in the examiner's report. It is understood that it will be the responsibility of the Supervisory Committee to discuss the suggested changes with the candidate, to determine which should be incorporated in the thesis before its final submission.

\*\*This recommendation reflects the examiner's opinion that further research, re-analysis of data, or thorough rewriting of the material is required. The thesis may, however, be re-submitted for examination.

- b. No candidate will be permitted to re-submit a thesis more than once. If the Dean decides that the thesis must be revised before it can be orally defended (as specified in 3.a.ii.) the resubmitted thesis will be examined by a Board which may differ in whole or in part from the original. In the case of a re-submitted thesis an examiner may recommend only:
  - i. that the candidate be allowed to proceed to the oral defence of the thesis, or;
  - ii. that the candidate should be failed.
- c. After receiving the reports from all three voting members of the Board the Dean will consider the recommendations and determine whether an oral defence of the thesis will be scheduled.
- d. The Final Oral Examination and Defence of Thesis will take place at a time and place to be determined by the Dean of Graduate Studies and will be chaired by the Dean or his/her delegate. The presence of all members of the Examining Board is normally required.
- e. Following the defence, the Board will meet *in camera* to render a final assessment of the thesis and the candidate's ability to defend his/her work. The Board may recommend one of the following outcomes:
  - i. Passed with distinction (Awarded to candidates who demonstrate superior knowledge of their chosen field; this category requires unanimous support of the Board\*.)

- ii. Passed\*
- iii. Passed Subject to Conditions\*\*
- iv. Re-examination required\*\*\*
- v. Failed\*\*\*\*

\*This recommendation may have attached to it the requirement that the candidate complete certain specified revisions to the satisfaction of the Supervisory Committee, the Head of the academic unit and the Dean. These revisions must have been specified in the written appraisal submitted prior to the Oral Examination.

\*\*This recommendation is made if there are revisions beyond those specified in the written appraisal submitted prior to the Oral Examination. This recommendation must have the conditions attached and cannot include the option of re-examination.

\*\*\*The members of the Thesis Examination Board may attach to this recommendation a list of any requirements which they feel are appropriate.

\*\*\*\*Re-examination not permitted.

- f. If the members of the Board are unanimous in their recommendation, the Chair of the Examination may accept this recommendation and inform the candidate of the decision. In any other case, however, the delivering of any final decision shall be deferred pending further consultation within the School of Graduate Studies.
- g. No candidate shall be permitted more than two Oral Examinations.

### 1.2.10.5 Time Limit for Revision

The final version of Master's and Ph.D. theses/reports found acceptable with or without corrections shall be submitted to the School of Graduate Studies within 6 months of the date on which the thesis/report and the student's examiners' reports are returned to the student's academic unit. If a corrected thesis/report is not submitted within 6 months the student is considered to have withdrawn from the program. After this time, the student must apply to be readmitted.

Master's and Ph.D. theses/reports requiring re-examination shall be resubmitted to the School of Graduate Studies within 12 months of the date on which the thesis/report and the examiner's reports are returned to the student. Students requiring resubmission and re-examination of theses/reports must maintain their registration during this period. Failure to resubmit the revised thesis/report within 12 months will result in termination of the student's program.

Note: Please refer to **Registration** for regulations governing program registration.

### 1.2.10.6 Prepublication

Publication of material before submission of the thesis/report for examination is permitted. The School of Graduate Studies and Supervisor should be informed of such publication.

## 1.2.11 Graduation Procedure

Candidates expecting to graduate at any particular Convocation must apply online to the Office of the Registrar at [www.mun.ca/regoff/](http://www.mun.ca/regoff/) at least by the time of the submission of the Thesis, Project Report or Internship Report required by their program, or, if applicable, by the date of the final comprehensive examination.

## 1.2.12 Academic Behaviour

### 1.2.12.1 Principles

In the course of a graduate degree program students are expected to learn those principles which constitute proper academic behaviour. Within the University Community there is a collective responsibility to maintain a high level of scholarly integrity. Dishonesty has no place in the academic community. Academic misbehaviour cannot be condoned or even appear to be condoned. Students have the responsibility to ascertain those actions which could be construed as dishonest or improper. Certain flagrant violations are listed below under Academic Dishonesty. Students are reminded that for guidance on proper scholarly behaviour they should seek assistance from their instructors and supervisors. The Graduate Students' Union will provide students with information on their legal rights and the information that advice about acceptable writing standards is available through the Writing Centre.

### 1.2.12.2 Academic Dishonesty: Offences

Note: In the following section the plural shall be deemed to include the singular.

Academic offences shall be deemed to include, but shall not be limited to, the following:

1. **Cheating:** Cheating on examinations, theses, assignments, work term reports, projects, internship reports, or any other tests.  
Cheating includes copying from another student's work or allowing another student to copy from one's own work, consulting with any unauthorized person during an examination or test, or using unauthorized aids; or knowingly recording or reporting false empirical or statistical data. The work referred to includes examinations, theses, assignments, work term reports, projects, internship reports, or any other tests which are to be used in judging the student's performance in a course or program of study, or on any special tests which the University may offer.
2. **Impersonation:** Impersonating another student or allowing oneself to be impersonated.  
By impersonation is meant the imitation of a student or entrance into an arrangement with another person to be impersonated for purposes of taking examinations or tests or carrying out laboratory or other assignments.
3. **Plagiarism:** Plagiarism is the act of presenting the ideas or works of another as one's own. This applies to all material such as theses, essays, laboratory reports, work term reports, design projects, seminar presentations, statistical data, computer programs and research results. The properly acknowledged use of sources is an accepted and important part of scholarship. Use of such material without acknowledgement, however, is contrary to accepted norms of academic behaviour.
4. **Theft of examination papers or other material:** By theft is meant obtaining by an improper means examination papers, tests, or any other such material.
5. **Use and/or distribution of stolen material:** The use of material which the student knows to have been improperly obtained and/or the distribution of such material is considered to be an academic offence.
6. **Submitting false information:** This offence includes falsifying, submitting or causing to submit false academic transcripts, forms or records, credentials, medical or other certificates, or making a false or incomplete declaration to the University.
7. **Submitting work for one course which has been or is being submitted to another course without express permission to do**

**so:** This includes the presentation of an essay, report or assignment to satisfy some or all of the requirements of a course when that essay, report, or assignment has been previously submitted or is concurrently being submitted for another course without the express permission of the professor(s) involved.

### 1.2.12.3 General Procedure

1. When a member of the University community has grounds for belief that an academic offence has been committed, that person will report the matter without delay to the Head of the Department or the appropriate academic officer (i.e., Dean or Director) of the unit in which the offence occurred. In the case of non-academic units, such as the Office of the Registrar, Library and Computing Services, the matter shall be referred through the University Officer in charge of that unit. The student should be informed of the suspicion as soon as possible in an effort to avoid further improper behaviour. There should then be an immediate direct attempt to resolve minor offences between the instructor or supervisor and the student(s) concerned at the departmental level. Only if resolution proves impossible, or one party is dissatisfied with the resolution, should the Department Head or other appropriate academic officer become further involved.
2. If, in the judgment of the Department Head or other appropriate academic officer (in consultation with his Dean of Faculty) the alleged offence against University regulations is such as to warrant resolution through the School of Graduate Studies, the Department Head or other appropriate academic officer will refer the matter to the Dean of Graduate Studies, and procedures for resolution by the School of Graduate Studies will be implemented.
3. If, in the judgment of the Department Head or other appropriate academic officer, the offence warrants resolution through departmental procedures, the individuals involved will be advised to attempt to resolve the matter without proceeding to a formal hearing. In the event that no resolution is possible between the individual parties, the Department Head or other appropriate academic officer will institute proceedings through the School of Graduate Studies. In all cases, it is the responsibility of the Department Head or other appropriate academic officer to ensure that fairness and impartiality are achieved in the treatment of students.
4. The principle of anonymity shall apply. All written documents shall refer to the student by number and the faculty member by letter.

### 1.2.12.4 Procedure for Departmental Resolution

If, upon receiving a report of an alleged academic offence the Department Head or other appropriate academic officer, decide that an attempt should be made to resolve that matter within the department the following procedures shall apply:

1. The Department Head or other appropriate academic officer shall request that the accuser and the accused meet with him (or her) and at the meeting the Department Head or other appropriate academic officer shall state the allegation, indicate the range of applicable penalties, and arrange a second meeting between the accuser and the accused only.
2. At the second meeting the parties (accuser and accused) shall endeavour to obtain a mutually satisfactory resolution of the matter.
3. The parties (accuser and accused) shall report jointly to the Department Head or other appropriate academic officer on the result of their second meeting.
4. If the report is of a resolution which the Department Head or other appropriate officer considers to be fair and equitable the matter shall be considered closed. If the Department Head or other appropriate academic officer considers the reported resolution to be unfair and/or inequitable he or she will endeavour to obtain an alternative satisfactory resolution directly with the parties.
5. Should all reasonable efforts to obtain a Departmental resolution fail, the Department Head or other appropriate academic officer will refer the case to the Dean of Graduate Studies and shall inform the accuser and the accused accordingly. From this stage onward procedures for resolution by the School of Graduate Studies will apply.

Notes: 1. *The accused or accuser may request, during the procedures for an informal resolution, that the case be referred to the Dean of Graduate Studies and thereafter the procedures for resolution by the School of Graduate Studies will apply.*  
 2. *Procedures for Departmental Resolution will not be applied to cases involving alleged offences on final examinations.*  
 3. *If at any stage of the procedures for either Departmental or Graduate Studies resolution, the accused fails to appear or to respond to a charge, without reasonable cause, within two weeks of notification of an allegation, action may be taken on the charge in the absence of the accused.*  
 4. *If at any stage of the procedures for either Departmental or Graduate Studies resolution, the accuser fails to appear at a scheduled hearing to defend an allegation, without reasonable cause, within two weeks of notification by the Department Head or other appropriate academic officer, the action will be dismissed.*

### 1.2.12.5 Procedures for Resolution by the School of Graduate Studies

If the matter cannot be resolved following the Procedure for Departmental Resolution as outlined above, or if the allegation involves a major breach of University regulations, the following procedures shall apply:

1. If the Department Head or other appropriate academic officer (in consultation with the Dean of his faculty) is satisfied that the student has a serious case to answer, he or she shall inform the student in writing of the nature of the case against him or her. In addition, the Department Head or other appropriate academic officer shall report to the Dean of Graduate Studies who shall immediately appoint a disinterested Investigator from the membership of the Academic Council of Graduate Studies. The Investigator will interview separately the accuser and accused and relevant witnesses. At these interviews, the Investigator, the accuser, the accused and relevant witnesses all have the right to be accompanied by a registered student or a member of the Faculty or Staff of the University.
2. Upon completion of these interviews, the Investigator shall submit a written report of all findings to the Dean of Graduate Studies.
3. The Dean of Graduate Studies shall present this report to both the accuser and accused for perusal and comment. Once in receipt of this report, the accuser and accused shall have two weeks in which to submit to the Dean of Graduate Studies any additional comments on the report that he or she wishes to be considered.
4. Upon receipt of all information from the Investigator as well as comments from the accuser and accused, the Dean of Graduate Studies shall strike an *ad hoc* committee to review the case and make recommendations to the Academic Council of the School of Graduate Studies. The Investigator may be asked to attend the meetings of the *ad hoc* committee to answer questions and provide information pertinent to the case, but shall be absent from the formal discussion and voting.
5. The Academic Council of the School of Graduate Studies shall take appropriate action in accordance with the section headed "Penalties".

Notes: 1. *If at any stage of the procedures for either Departmental or Graduate Studies resolution, the accused fails to appear or to respond to a charge, without reasonable cause, within two weeks of notification of an allegation, action may be taken on the charge in the absence of the accused. Action will proceed regardless of the current status of the student.*  
 2. *If at any stage of the procedures for either informal or formal resolution, the accuser fails to appear at a scheduled hearing to defend an allegation without reasonable cause, within 2 weeks of notification the action will be dismissed.*

### 1.2.12.6 Penalties

The imposition of any of the penalties listed below does not preclude further action under the Criminal Code of Canada. A student who has been found guilty of an academic offence will be subject to a penalty or penalties commensurate with the offence. The range of penalties and their determination is given below. Enforcement of penalties resulting from Procedures for Resolution by the School of Graduate Studies will be overseen by the Registrar. Some cases may warrant more than one penalty for the same offence, and previous academic misconduct will be taken into account in determining penalties. Penalties resulting from Department resolution shall be limited to 1. and 2. Penalties shall be imposed on the basis of the student's status at the time of the offence.

1. **Reprimand:** This shall be in the nature of a warning by the Department Head, or appropriate academic officer or an appropriate Committee to the student that his/her behaviour has been unacceptable to the University.
2. **Reduction of grade:** A reduction of grade will apply to an examination, test, or assignment to which an offence is relevant, and will be decided by the Academic Council of the School of Graduate Studies upon the recommendation of the Department concerned in the case of a resolution by the School of Graduate Studies, or by a Department Head, or appropriate academic officer in the case of a Departmental resolution. Since graduate students must obtain a B grade in required courses and a pass in additional courses a reduction of grade could lead to termination of program.
3. **Probation:** The period of probation will be determined by the Academic Council of the School of Graduate Studies. The impact of being placed on probation is that the commission of any further academic offence during the period of probation may lead to suspension or expulsion.
4. **Suspension:** Suspension will apply to a course, department, faculty, school, or the University. The period of suspension will be determined by the Academic Council of the School of Graduate Studies and shall not exceed three consecutive semesters, and shall be part of the allowable time for a graduate program.
5. **Expulsion:** The recommendation for expulsion from the University will be made by the Academic Council of the School of Graduate Studies to the President for his/her final decision. Prior to the President's decision, the Secretary of the Academic Council will notify the accused, in writing, of the recommendation for expulsion from the University. The accused will be allowed a period of two weeks following the date of release of such notification to lodge an appeal before the President's final decision concerning expulsion from the University. Any such appeal should be made in writing to the Executive Committee of Senate.
6. **Revocation of Degree:** The recommendation will be made by the Academic Council of the School of Graduate Studies that the Senate rescind a degree that has been obtained by submission of fraudulent or plagiarized work.
7. **Rescinding of Admission and Degree Revocation:** The submission of false information (see **Academic Dishonesty Offences**) in support of an application for admission to Memorial University of Newfoundland is an Academic Dishonesty Offence. In the event that this offence is discovered after the granting of a degree, the Academic Council of the School of Graduate Studies may recommend to the Senate that the student's admission be rescinded and that the degree(s) granted to the student be revoked.

In the event that a student has been found guilty of an Academic Dishonesty Offence and when a penalty has been determined, a notation on the student's transcript may be made by the Registrar as provided for in **Transcript Entries** below.

### 1.2.12.7 Transcript Entries

Transcript entries shall relate to the penalty(ies) imposed as follows:

Penalty	Transcript Entry
Reprimand	No transcript entry
Reduction of Grade	Entry of final grade for course
Probation	"On probation at the University for academic misconduct until Day, Month, Year"
Suspension	"Suspended from the School of Graduate Studies for academic misconduct until Day, Month, Year"
Expulsion	"Expelled from the University for academic misconduct"
Revocation of Degree	"Degree revoked for Academic Dishonesty"

\* The transcript entries for 'probation' or 'suspension' will be removed entirely upon the expiration of the penalty.

### 1.2.12.8 Disposition of Documentation

The disposition of documents relating to allegations under these procedures shall be as follows:

1. The cases where the allegation was either found "not proven" or "unfounded" no documentation shall be retained, otherwise
2. In the case of a resolution effected through the procedures for departmental resolution, all documentation shall be retained in the office of the relevant Department Head or other appropriate academic officer.  
or
3. In the case of a resolution effected through the procedures for resolution by the School of Graduate Studies all documentation shall be forwarded to the Office of the Registrar.

### 1.2.12.9 Right of Appeal

Appeals against decisions of the Academic Council of the School of Graduate Studies made under **Procedures for Resolution by the School of Graduate Studies** shall be directed to the Executive Committee of Senate.

- Notes:
1. These procedures shall apply to all academic offences relating to graduate studies involving, but not limited to, those students who either have been or who are enrolled at Memorial University of Newfoundland. Notification of an allegation of academic dishonesty will be forwarded to the last known mailing address of the student as noted on the files of the School of Graduate Studies. The University reserves the right to implement action under these procedures where an allegation has been made against a student but where reasonable efforts to contact the student have failed.
  2. While a student can continue in a program of studies, if eligible, while an investigation under these procedures is being carried out, the University does not accept liability for any consequences to the student's progress including retroactive effect on grades and promotion within a program, arising from an investigation and any negative decision rendered. However, the University may take these consequences into account as appropriate, and to the extent feasible, in cases where charges are dropped or the student is found not guilty.

### 1.2.13 Termination of a Graduate Program

Grounds for termination of a Graduate Program are as follows:

1. a. Failure to obtain the required grades in courses as stated in the appropriate degree regulations (see **Evaluation**);  
b. Failure in comprehensive examinations (see **Comprehensive Examinations**);

- c. Recommendation of the Supervisory Committee (see **Supervision**);
  - d. Failure of Thesis, Project or Internship (see **Theses and Reports**);
  - e. Failure to register in any semester by the final date for adding courses (see **Registration, Program Registration, 1.**);
  - f. Lack of progress in a program;
  - g. Failure to comply with the conditions of admission into a program, unless the conditions of admission have been changed with approval of the academic unit and the School of Graduate Studies; or
  - h. Academic misconduct as outlined under General Regulation **Academic Behaviour** governing the School of Graduate Studies.
2. The foregoing notwithstanding the University reserves the right to require students to discontinue their program or to deny them admission where, in the opinion of the Academic Council of the School of Graduate Studies, following appropriate professional consultation, there is a reasonable likelihood that a student's health or conduct could result in endangering the lives, health or safety of other persons on campus or in settings related to the student's university studies.
  3. The foregoing notwithstanding, the School of Graduate Studies reserves the right to require students to discontinue their studies, or to deny them re-admission, where a student has been determined to have engaged in unprofessional conduct. The code of ethics of each profession will serve as the guideline as to what constitutes unprofessional conduct. However, should there not be any statements of what constitutes unprofessional conduct, the following standard will apply:

Unprofessional Conduct: That conduct which involves a breach of the duties required by professional ethics.

- Notes: 1. *If the University or a School or Faculty requires a student to discontinue his/her studies, that student must be advised of the nature of the case against him/her, must be provided with an opportunity to answer the case against him/her and must be advised of the right to appeal before the penalty imposed takes effect.*
2. *Appeals against actions taken under Clause 2. should be directed to the Senate of the University. Any such appeal should be made in writing clearly stating the basis for the appeal and should be directed to the Secretary of Senate, c/o the Office of the Registrar.*
3. *Appeals against actions taken under Clause 3. should be directed to the Academic Council of the School of Graduate Studies.*

### 1.2.14 Provision for Reapplication

1. A student whose program of studies has been terminated for any of the reasons outlined under **Termination of a Graduate Program** may apply for admission to a new program of studies leading to the same degree.
2. Notwithstanding the above, a student whose program of studies has been terminated under **Termination of a Graduate Program**, i.e., shall be readmitted to the existing program only under the following conditions:
  - a. on the recommendation of the appropriate academic unit;
  - b. on the payment to the University of those registration fees which would have been payable had the student remained in continuous registration during the period since the termination of the program;
  - c. on the understanding that the time period during which the student was not registered shall be considered as part of the maximum time permitted for the completion of the degree.

### 1.2.15 Graduate Diplomas

1. **Clinical Epidemiology Research** - See Master of Science in Medicine
2. **Community Health** - See Master of Science in Medicine
3. **Fisheries Resource Management** - See Master of Marine Studies
4. **Health Professional Education** - See Master of Education (Post-Secondary Studies)
5. **Post Masters Nurse Practitioner** - See Master of Nursing

## 2 Regulations Governing the Degree of Master of Applied Science

The degree of Master of Applied Science is offered in three areas: Computer Engineering, Environmental Engineering and Applied Science, and Environmental Systems Engineering and Management.

### 2.1 Computer Engineering

#### 2.1.1 Program of Study

1. The Faculty of Engineering and Applied Science offers a program in Computer Engineering leading to the degree of Master of Applied Science in Computer Engineering (M.A.Sc.). The program is available only on a full-time basis.
2. The program is offered by the Faculty of Engineering and Applied Science and will be administered by a Board of Studies appointed by the Dean of Engineering and Applied Science.

#### 2.1.2 Qualifications for Admission

1. Admission to the program is limited and competitive.
2. To be eligible for consideration for admission, applicants will have at least a second class engineering degree in computer engineering, computer science or electrical engineering; they will have background in many of the following areas: object-oriented programming, data structures, digital logic, computer organization, circuits & electronics, systems & signals, communications, discrete mathematics, probability & statistics and engineering design.
3. To be eligible for consideration for admission, applicants will meet the English Proficiency Requirements described under **English Proficiency Requirements**.

#### 2.1.3 Degree Requirements

1. The degree program requires the completion of 33 credit hours, 6 of which comprise a project course.
  - a. Students are required to complete 9801, 9861, 9865, 9867, 9871, 9874 and 9876.
  - b. Three of the following courses must be selected: 9802/05, 9806/09, 9821, 9822, 9868, 9869, 9872, 9875, 9877, 9878, 9879, 9880/83, 9888/91, Computer Science 6752, Computer Science 6756, Physics 6XXX.

## 2.1.4 Evaluation

Students must obtain a grade of at least 65% in all program courses to receive credit for the course towards their program requirements. Any student, who fails to receive 65% or more in a course, must repeat the course in the case of core courses, or must either repeat or replace the course with another program course in the case of elective courses. Any student who receives a grade of less than 65% in two courses or in a repeated course will be required to withdraw from the program.

### Courses

9801 Computer Engineering Project (6 credit hours)  
 9802/05 Special Topics in Computer Engineering  
 9806/09 Special Topics in Communications Engineering  
 9821 Digital Signal Processing  
 9822 Nonlinear Digital Image Processing & Analysis  
 9861 High-Performance Computer Architecture  
 9865 Advanced Digital Systems  
 9867 Advanced Computing Concepts for Engineering  
 9868 ASIC Design  
 9869 Advanced Concurrent Programming  
 9871 Information Theory and Coding  
 9872 Digital Communications  
 9874 Software Design and Specification  
 9875 Embedded and Real-Time Systems Design  
 9876 Advanced Data Networks  
 9877 Computer and Communications Security  
 9878 Wireless and Mobile Communications  
 9879 Formal Specification and Development  
 9880-83 Special Topics in Computer Engineering  
 9888-91 Special Topics in Communications Engineering  
 Computer Science 6752 Applications of Computer Graphics  
 Computer Science 6756 Digital Image Processing  
 Physics 6XXX Optics and Photonics

## 2.2 Environmental Engineering and Applied Science

### 2.2.1 Qualifications for Admission

1. Admission is limited and competitive. To be considered for admission, applicants shall normally hold a Bachelor's degree in Engineering or an Honours degree in Science with at least second class standing, or equivalent from an institution recognized by the Senate or shall have qualifications and/or experience acceptable to the Dean of Graduate Studies and the Board of Studies. The Board of Studies will make recommendations on admission to the Dean of Graduate Studies.
2. The Board of Studies will oversee academic aspects of students' programs on behalf of the Faculty Council of the Faculty of Engineering and Applied Science.

### 2.2.2 Program of Study

1. The Faculty of Engineering and Applied Science offers a program in Environmental Engineering and Applied Science leading to the degree of Master of Applied Science (M.A.Sc.). The program is available on a full-time or part-time basis and full-time students will normally complete the program in one year. Admission is open to students with Engineering or Science backgrounds. No financial support will be available to students admitted to the program.
2. The program is offered by the Faculty of Engineering and Applied Science and will be administered by a Board of Studies appointed by the Dean of Engineering and Applied Science.
3. The Master of Applied Science degree is a multi-disciplinary, professionally oriented degree which provides an advanced education for students who are already working, or who intend to work, in the environmental industry.

### 2.2.3 Degree Requirements

1. To the extent that resources permit, individual programs will be developed to suit students' interests and needs. However, all programs must be approved by the Board of Studies and the Dean of Graduate Studies. All **General Regulations** of the School of Graduate Studies shall apply to this degree.
2. The degree program requires the completion of 27 credit hours, six of which comprise a project course.
  - a. Students are required to complete 960A and 960B.
  - b. the remaining courses must be selected so that 6 credit hours are selected from 9601, 9603, 9609, and 9624; 3 credit hours are selected from 9605 and 9621; and 12 credit hours are selected from 9622, 9625, ENVE/ENVS 6000, ENVE/ENVS 6001, ENVE/ENVS 6002, ENVE/ENVS 6003, and Geography 6250.

### Courses

960A/B Environmental Engineering Project  
 9601 Environmental Pollution and Mitigation (Cross listed as ENVS 6004)  
 9603 Environmental Sampling and Pollutant Analysis (Cross listed as ENVS 6005)  
 9605 Advanced Wastewater Treatment  
 9609 Environmental Risk Assessment (same as ENVS 6007)  
 9610-9615 Special Topics in Environmental Engineering and Applied Science  
 9621 Soil Remediation Engineering  
 9622 Environmental Statistics  
 9624 Air Pollution (same as ENVS 6008)  
 9625 Environmental Impact of Offshore Operations  
 ENVE/ENVS 6000 Environmental Science and Technology  
 ENVE/ENVS 6001 Earth and Ocean Systems  
 ENVE/ENVS 6002 Environmental Chemistry and Toxicology  
 ENVE/ENVS 6003 Applied Ecology  
 Geography 6250 Conservation of Natural Resources



## 2.3 Environmental Systems Engineering and Management

### 2.3.1 Program of Study

1. The Faculty of Engineering and Applied Science offers a program in Environmental Engineering and Applied Science leading to the degree of Master of Applied Science in Environmental Systems Engineering and Management (ESEM). The program is available on a full-time basis.
2. The program is offered by the Faculty of Engineering and Applied Science and will be administered by a Board of Studies appointed by the Dean of Engineering and Applied Science.

### 2.3.2 Qualifications for Admission

1. Admission is limited and competitive.
2. To be considered for admission, applicants shall normally hold a Bachelor's degree in engineering preferably in civil/environmental/chemical/processing/petroleum engineering or equivalent from a recognized university with an aggregate mark of 75% or above.
3. To be eligible for consideration for admission, applicants will meet the English Proficiency Requirements described under General Regulations **Qualification for Admission**.

### 2.3.3 Degree Requirements

1. The degree program requires the completion of 30 credit hours.
  - a. 6 credit hours comprising a project course 9600.
  - b. 15 credit hours comprised of 9601, 9609, 9626, 9627, and 9628.
  - c. 6 credit hours (two courses) to be selected from 9603, 9621, 9622, 9624, 9625, 9629, and 9630, 9605, 9610-9615.
  - d. 3 credit hours (one course) from ENVE/ENVS 6001, ENVE/ENVS 6002, ENVE/ENVS 6003, Geography 6250.

#### Courses

9600 Environmental Engineering Project (6 credit hours)  
 9601 Environmental Pollution and Mitigation (cross listed as ENVS 6004)  
 9603 Environmental Sampling and Pollutant Analysis (cross listed as ENVS 6005)  
 9605 Advanced Wastewater Treatment  
 9609 Environmental Risk Assessment (cross listed as ENVS 6007)  
 9610-9615 Special Topics in Environmental Science & Engineering  
 9621 Soil Remediation Engineering  
 9622 Environmental Statistics  
 9624 Air Pollution (cross-listed as ENVS 6008)  
 9625 Environmental Aspects of Offshore Oil and Gas  
 9626 Environmental Management System  
 9627 Environmental Systems Engineering  
 9628 Environmental Laboratory  
 9629 Environmental Policy and Regulations  
 9630 Pollution Prevention  
 ENVE/ENVS 6001 Earth and Ocean Systems  
 ENVE/ENVS 6002 Environmental Chemistry and Toxicology  
 ENVE/ENVS 6003 Applied Ecology  
 Geography 6250 Conservation of Natural Resources

## 3 Regulations Governing the Degree of Master of Applied Social Psychology (Co-operative)

This program is designed to meet the needs of both students and employers. Students will gain the skills and knowledge necessary to ask appropriate questions and conduct research in a variety of applied settings (e.g., business, government, health care, etc.). Students completing the program will be qualified for either immediate employment or further education. Students' and employers' needs will be met by a program that combines training in basic scientific methods and social psychological theory with practical experience in a variety of work settings. The training in methods and theory will be provided by the academic component of the program and the practical experience will be provided by the cooperative, work term component.

### 3.1 Qualifications for Admission

1. Admission to the program is competitive and selective. To be considered for admission to the Master of Applied Social Psychology (Cooperative) an applicant shall normally hold at least a high second class Honours degree or its equivalent, both in achievement and depth of study, from an institution recognized by the Senate.
2. Applications
  - a. All applicants are required to submit results from the General section of the Graduate Record Examinations.
  - b. Applicants are required to submit with their applications an example of their academic writing. This could include, but is not limited to, papers submitted in class, honour's thesis, etc.
  - c. At least one letter of reference should come from someone who is familiar with the applicant's research capability.
3. Election will be based on an applicant's overall academic performance, scores on the Graduate Record Examination and letters of reference.
4. Admission to the program shall be upon acceptance by the Dean of Graduate Studies after recommendation by the Head of the Department of Psychology which will include a proposed program of study and a proposed supervisor.

### 3.2 Program of Study

1. Students should note that it is possible to enter Academic Term 1 only in the Fall semester commencing in September of each year.
2. Every candidate shall complete four Academic Terms in the Cooperative Program and shall normally be required to complete two Work Terms.

3. Courses shall be taken in Academic Terms of "blocks" in the sequence, order, and course load as follows:

**Fall:** 6000, 6400  
**Winter:** 6001, 6401  
**Spring:** Work term 1  
**Fall:** 6402, 6403  
**Winter:** Work term 2  
**Spring:** 6404

### 3.3 Evaluation and Advancement

1. In order to continue in good standing in the program and in order to qualify for the Master's degree, a candidate shall obtain a grade of A or B for program courses, and complete two Work Terms.
2. The dates for starting and finishing each Work Term are shown in the University Diary. Successful completion of the Work Term requirements is a prerequisite to graduation.
3. A competition for Work Term employment is organized by the Co-operative Education Services Centre (CESC). Students may also obtain their own Work Term jobs outside the competition. Such jobs must be confirmed by letter from the employer and approved by the Head of Psychology and by the CESC on or before the first day of the Work Term.

Work Term jobs may be outside St. John's and possibly outside Newfoundland and Labrador. Students who do not wish to accept a Work Term job arranged by CESC shall be responsible for finding an alternative acceptable to the Head of Psychology and the CESC.

By entering the competition, students give permission for the CESC to supply their University transcripts to potential employers.

4. The overall evaluation of the Work Term is the responsibility of the CESC. The Work Term evaluation shall consist of two components:
  - a. **On-the-job Student Performance:**  
 Job performance shall be assessed by a co-ordinator using information gathered during the Work Term and input from the employer towards the end of the Work Term. Formal written documentation from the employer shall be sought.
  - b. **The Work Report:**
    - i. Work term reports shall be evaluated by a member of the CESC or a member of faculty in the Department of Psychology. If an employer designates a report to be of a confidential nature, both employer and co-ordinator must agree as to the methods to protect the confidentiality of such a report before the report may be accepted for evaluation.
    - ii. Reports must be prepared according to American Psychological Association specifications and contain original work related to the Work Term placement. The topic must relate to the work experience and will be chosen by the student in consultation with the employer. For promotion from the Work Term, a student must obtain at least 65% in each component.
5. If a student fails to achieve the Work Term standards specified above the student will be required to withdraw from the program. Such a student may reapply to the program after lapse of two semesters, at which time the student will be required to complete a further Work Term with satisfactory performance before being admitted to any further academic term in the Faculty. A Work Term may be repeated once.
6. Students are not permitted to drop Work Terms without prior approval of the Graduate Studies Committee of the Department of Psychology, upon the recommendation of the CESC. The Graduate Studies Committee will make a recommendation to the Head of Department who will make the final decision. Students who drop a Work Term without permission, or who fail to honour an agreement to work with an employer, or who conduct themselves in such a manner as to cause their discharge from the job, will normally be awarded a failed grade for the Work Term. Permission to drop a Work Term does not constitute a waiver of degree requirements, and students who have obtained such permission must complete an approved Work Term in lieu of the one dropped.

#### Courses

6000 Advanced Statistics in Psychology  
 6001 Research Design  
 601W Work Term 1  
 602W Work Term 2  
 6400 Theory and Methods in Social Psychology  
 6401 Social Cognition  
 6402 Group Processes  
 6403 Advanced Methods in Applied Social Psychological Research  
 6404 Project in Applied Social Psychology

## 4 Regulations Governing the Degree of Master of Applied Statistics

The degree of Master of Applied Statistics (M.A.S.) is a highly structured program incorporating 18 credit hours in program courses and a practicum in applied statistics. The degree is offered in the Department of Mathematics and Statistics by full-time or part-time study.

### 4.1 Qualifications for Admission

1. Admission is limited and competitive. To be considered for admission to the Master of Applied Statistics program, an applicant shall normally hold at least a high second class Honours degree or its equivalent, both in achievement and depth of study, from an institution recognized by the Senate.
2. In addition, an applicant shall normally have completed undergraduate courses in statistics which cover the material of Statistics 3521, 3530, 4410, 4520, 4560, 4561, 4590, 4591. If necessary, an applicant may be required to demonstrate a satisfactory knowledge of the above courses in an examination administered by the Department of Mathematics and Statistics.
3. Applicants who do not meet these requirements should consult the Department of Mathematics and Statistics about a program of further undergraduate courses. Such a program is intended to provide the candidate with an adequate statistical background. Such courses may not be used to fulfill the program course requirements of the Master of Applied Statistics degree.
4. Admission to the program shall be upon acceptance by the Dean of Graduate Studies after recommendation by the Head of the Department of Mathematics and Statistics along with a proposed program of study and a proposed supervisor.

### 4.2 Program of Study

The minimum requirements for the degree of Master of Applied Statistics are completion of the following:

1. Six credit hours from the following courses:  
6510 Mathematical Statistics, 6520 Linear Models, 6560 Continuous Multivariate Analysis, or 6561 Categorical Data Analysis
2. 6590 A course in Statistical Consulting
3. Nine additional credit hours selected from 6503-6589.
4. A practicum: An applied statistics project and an associated report. The report must demonstrate a satisfactory general mastery of statistical knowledge.

### 4.3 Evaluation

1. In order to continue in graduate studies and in order to qualify for a Master's degree, a candidate shall obtain an A or B for program courses and complete successfully the practicum requirement.
2. Statistics 6590 will be evaluated by the course co-ordinator in consultation with associated statistical consultants.
3. Evaluation of the practicum shall follow that of Masters Theses and Reports in Graduate Studies **General Regulations**.

Note: *Every candidate in graduate studies shall comply with the **General Regulations**, the degree regulations and any additional requirements of the Department of Mathematics and Statistics.*

#### Courses

A selection of the following graduate courses will be offered to meet the requirements of candidates, as far as the resources of the Department will allow:

#### Mathematics

6100 Dynamical Systems  
 6101 Modern Perturbation Theory  
 6102-6109 Special Topics in Applied Mathematics  
 6120 The Theoretical Fluid Dynamics  
 6121 Functional Differential Equations  
 6212 Numerical Methods for Initial Value Problems  
 6201 Numerical Methods for Partial Differential Equations  
 6202-6209 Special Topics in Numerical Analysis  
 6210 Numerical Solution of Differential Equations (for Computational Science students only - required core course)  
 6300 Algebraic Topology I (Homology Theory)  
 6301 Algebraic Topology II (Homotopy Theory)  
 6302 Algebraic Topology III (Theory of Fibre Bundles)  
 6332 Point Set Topology  
 6304-6309 Special Topics in Topology  
 6310 Functional Analysis  
 6311 Complex Analysis  
 6312 Measure Theory  
 6313-6319 Special Topics in Analysis  
 6320 Group Theory  
 6321 Ring Theory  
 6322 Nonassociative Algebra  
 6323 Homological Algebra  
 6324-6329 Special Topics in Algebra  
 6330 Analytic Number Theory  
 6331 Algebraic Number Theory  
 6340 Graph Theory  
 6341 Combinatorial Design Theory  
 6342 Advanced Enumeration  
 6343-6349 Special Topics in Combinatorics  
 6910 Topology Seminar  
 6940 Analysis Seminar  
 6950 Algebra Seminar

#### Statistics

6503 Stochastic Processes  
 6505 Survival Analysis  
 6510 Mathematical Statistics  
 6520 Linear Models  
 6530 Generalized Linear Longitudinal Mixed Models  
 6540 Time Series Analysis  
 6545 Statistical Computing  
 6550 Nonparametric Statistics  
 6560 Continuous Multivariate Analysis  
 6561 Categorical Data Analysis  
 6570-6589 Selected Topics in Statistics and Probability  
 6590 A Course in Statistical Consulting  
 6930 Statistics Seminar

## 5 Regulations Governing the Degree of Master of Arts and Specific Program Regulations

#### Professor and Interim Dean of Arts

S.B. Wolinetz

#### Associate Professor and Associate Dean (Graduate and Research)

É.L. Simms

The degree of Master of Arts is offered in Anthropology, Classics, Economics, English Language and Literature, Ethnomusicology, Folklore, French Studies, Geography, German Language and Literature, History, Linguistics, Philosophy, Political Science, Religious

Studies and Sociology.

Applicants are advised to consult, in addition to the regulations governing the degree of Master of Arts, both the **General Regulations** and the particular regulations of the appropriate Departments.

## 5.1 Qualifications for Admission

1. Admission is limited and competitive. To be considered for admission an applicant shall hold a Bachelor's degree or its equivalent from an institution recognized by the Senate and shall have a knowledge of the proposed field of specialization satisfactory to the Department concerned (or Departments, when interdisciplinary study is intended) and to the Dean.
2. Preference will normally be given to applicants who hold an appropriate Honours degree, either from Memorial University of Newfoundland, or from another university whose Honours degree is of comparable standing. Any other applicant who holds a Bachelor's degree or its equivalent will be considered for admission provided that:
  - a. the applicant's undergraduate record after the first year shows an average of at least grade B in courses in the proposed field of specialization.
  - b. the applicant's overall undergraduate record after the first year shows an average of at least grade B in all courses taken, and
  - c. the Department concerned satisfies the Dean that the applicant's work exhibits evidence of academic excellence.

Only in exceptional circumstances, and only on the recommendation of the Department concerned, will the Dean consider applicants who do not meet the requirements in a. and b. Such applicants, however, must meet the requirements in c.
3. An applicant may be required to demonstrate a satisfactory knowledge of the proposed field of study in an examination administered by the Department or Departments.
4. In most cases instruction is in English, and examinations and theses are to be written in English. (Language Departments, however, give instruction in the pertinent language and often require examinations and theses to be written in the language. In addition, other Departments may permit or even require examinations and/or theses to be written in a language other than English).

## 5.2 Program of Study and Research

1. The program of study for the Master of Arts degree shall consist of the successful completion of a program of courses and, in accordance with departmental regulations, either of a thesis embodying systematic research or of a Comprehensive Examination.
 

For programs requiring 24 credit hours or more, the academic unit may choose not to require a thesis or comprehensive examination.
2. Every candidate shall read at least 12 credit hours in program courses at the graduate level in one subject or in closely related subjects. Departmental regulations may require more courses than the minimum and this higher number is listed where applicable in the regulations of the Department.
3. Students may, with the approval of the Dean, augment their program with a limited number of other courses of their choice. Passing grades are not required in these non-program courses in order to continue in graduate studies or obtain a Master's degree.
 

However, the final grades in these courses will be recorded on the student's transcripts. The grading system in non-program courses shall be that appropriate to the particular course.
4. Candidates submitting a thesis on an approved topic shall conduct systematic research under the direction of a Supervisor recommended by the appropriate Department or Departments and approved by the Dean. The candidate may be required to take an oral examination.
5. Changes in either the program of courses or the topic of the thesis require the approval of the Dean.
6. On the recommendation of the Head of the Department, the Dean may waive, in part, the course requirements for a Master's degree.
7. Application for transfer from the Master of Arts to the Master of Philosophy is to be made to the Dean before the end of the second semester in the case of full-time students, and in the case of part-time students before 18 graduate credit hours have been completed.
8. The Dean may approve an application to transfer from the M.A. to the M.Phil. only when a new integrated program, acceptable to the Dean, is submitted.

## 5.3 Evaluation

1. In order to continue in the School of Graduate Studies and in order to qualify for a Master's degree, a candidate shall obtain an A or B grade in each regulation course. Some candidates may be required to read a specified number of additional graduate or undergraduate courses for which a passing grade must be achieved.
2. Students registered for credit shall write their examinations in their graduate courses at a time to be determined by the Dean on the recommendation of the Department.
3. Students registered in undergraduate courses shall satisfy examination requirements in these courses.
4. When, on a basis of consultation with the candidate, the instructors in graduate courses, and the thesis supervisor, the Head of a Department has determined that the candidate's work has fallen below a satisfactory level, the Head may recommend to the Dean that the candidate be required to withdraw from the program.

## 5.4 Thesis or Report

See General Regulation, **Theses and Reports**

## 5.5 Anthropology

**Associate Professor and Head of the Department**

W. Fife

The degree of Master of Arts is offered in Anthropology by either full-time or part-time study.

1. Candidates may specialize in either:
  - a. social and cultural anthropology or
  - b. archaeology and physical anthropology.

2. The choice of speciality will govern the selection of supervisor(s), courses, and thesis or research paper topics. When candidates are accepted into the program, they will be assigned one or more supervisors. Candidates' programs shall be the responsibility of their supervisor(s), the graduate co-ordinator(s), and the Head of the department.
3. If candidates' records suggest a deficiency in some area(s), the Department reserves the right to require that they complete additional undergraduate courses before beginning program courses.
4. Candidates in social and cultural anthropology may choose between a thesis and a non-thesis option.

#### **M.A. With Thesis**

1. Normally, the M.A. program should take two academic years to complete, of which the first year will be spent in (a) completing coursework, (b) writing and orally defending a thesis proposal before members of the faculty, and (c) beginning to carry out research. The second academic year will be spent in (d) completing research, (e) presenting an oral research report to the Department, and (f) completing a thesis.
2. Candidates for the degree of a Master of Arts in Anthropology will be required to complete not fewer than 12 credit hours, nor more than 18 credit hours of courses at the graduate level.
3. Most Department graduate courses are taught in either a seminar or tutorial framework; all courses require intensive reading, regular oral communication of ideas to faculty and other students, and preparation of written research papers and other assignments.
4. Normally, during the second semester of the first year of study in the program, a written thesis proposal which has been approved by the student's supervisor(s) will be circulated to all members of the Department. The written thesis proposal should be made available to faculty members at least two weeks prior to the scheduled date of a student's oral presentation and defence of the proposal.
5. Shortly following the completion of their research, candidates will be required to present an oral research report on their findings to the Department.
6. A final draft of the thesis will be evaluated in accordance with the requirements of the School of Graduate Studies.

#### **M.A. Without Thesis**

Normally, the M.A. program without thesis should take one academic year to complete. Candidates in social and cultural anthropology who choose to do the M.A. without thesis must normally complete 24 credit hours in graduate program courses; 15 of which will normally be from S/C 6440, S/C 6890 and S/C 6300.\* Nine additional credit hours are to be selected from the S/C graduate courses offered by the Department.

Note: \* S/C 6440 will be worth 9 credit hours. This course will normally be based on secondary literature and will be supervised by a faculty member.

#### **Courses**

A selection of the following graduate courses will be offered to meet the requirements of candidates, as far as the resources of the Department will allow.

#### **Archaeology/Physical Anthropology Courses (A/P)**

6020 Physical Anthropology  
 6040 Human Osteology  
 6095 Advanced Studies in Ethnohistory (same as Hist 6095)  
 6151 Palaeoethnobotany  
 6181 Palaeoeskimo Cultures of the Eastern Arctic  
 6182 Advances in Material Culture Analysis  
 6187 Readings in Maritime Provinces Prehistory  
 6189 Palaeopathology  
 6191 Approaches to Early Modern Material Culture  
 6192 Conservation Method and Theory  
 6290 Newfoundland and Labrador Prehistory  
 6310 Economic Analyses in Archaeology  
 6320 Ethnoarchaeology  
 6330 Archaeological Field Conservation  
 6409 History of Archaeology  
 6411 Theory and Method in the Study of Archaeology and Prehistory  
 6500 Special Topics in Historical Archaeology (Prerequisite 6191)  
 6680-6699 Special Topics in Archaeology and Prehistory  
 6700 Interpretative Methods in Prehistoric Archaeology  
 6701 Interpretative Methods in Historical Archaeology  
 6890 Graduate Seminar

#### **Social/Cultural Anthropology Courses (S/C)**

6010 Cultural Ecology  
 6071 Health and Illness: Cultural Contexts and Constructions  
 6081 Anthropology of Gender  
 6089 Anthropology of Underclass Life  
 6100 Social Organization  
 6110 Culture and Personality  
 6140 The Community  
 6210 Language and Culture  
 6240 Atlantic Regional Studies  
 6260 Social and Economic Development  
 6280 Newfoundland Ethnography  
 6281 Labrador Ethnography  
 6282 Ethnography of a Single Region  
 6300 Fieldwork and Interpretation of Culture  
 6400 Current Themes in Cultural Anthropology  
 6410 History of Anthropology  
 6412 Anthropological Theory  
 6413 Applied Anthropology  
 6430 Audiovisual Anthropology  
 6440 Master's Research Paper (9 credit hours)  
 6580-6599 Special Areas in Anthropology  
 6600 Contemporary Debates in Anthropology  
 6890 Graduate Seminar

## 5.6 Classics

### Associate Professor and Head of the Department

T.J. Allen

The Department of Classics offers an M.A. in Classics, with an emphasis on classical texts and research methods, which suitably prepared students may complete in 1 year of full-time study, normally beginning in September.

1. Applicants should have an Honours degree in Classics or a related field, including at least two years study in both Greek and Latin. Students expecting to complete the M.A. degree within 12 months must have at least 24 undergraduate credit hours in one language (Greek or Latin) and 18 undergraduate credit hours in the other. Other applicants may be required to take 3 or more credit hours at the undergraduate level, in addition to their graduate course work.
2. Students will complete 18 credit hours in courses at the 6000 level (including 6100 and 6101) plus any additional courses the department may deem necessary. The required courses 6100 and 6101 involve the intensive reading of ancient texts and also introduce students systematically to the most important research methods in Classics, including palaeography, textual criticism, bibliography, and historiography. Texts and methods chosen may vary according to the availability of instructors.
3. Students are also required to complete one of the following:
  - a. Research Essay  
Students will complete a research essay (approximately 15,000 words), normally in the third semester of their program of study. The essay will be graded by two members of faculty and will be assigned a PASS/FAIL grade.
  - b. Translation Examination  
Students will be required to pass two exams based on a reading list of Greek and Roman authors. One exam will be on Greek authors and one on Latin authors. The exams test students' ability to translate from Greek and Latin texts into English and will also require some commentary on the set texts. Students are expected to write these exams in the third semester of their program of study. The exam will be graded by two members of faculty and will be assigned a PASS/FAIL grade.
4. Students are required to complete an examination testing their competence in German, Italian or French, as early as possible in their program of study. This examination will be assigned a PASS/FAIL grade. (See **Evaluation, Evaluation of Graduate Students**, 4.)

### Courses

6010 Greek Literature: Prose  
 6020 Latin Literature: Prose  
 6030 Greek Literature: Poetry  
 6040 Latin Literature: Poetry  
 6050 Greek History  
 6060 Roman History  
 6080 Ancient Philosophical Authors  
 6100 Greek Literature/Research Methods  
 6101 Latin Literature/Research Methods

Note: *The prerequisite of all 6000-level courses is at least three courses numbered 3000 and above (or equivalent) in the appropriate language.*

## 5.7 Economics

### Professor and Head of the Department

N. Roy

The degree of Master of Arts is offered in Economics. The focus of the program is applied economics with emphasis on Natural Resource and Environmental Economics and Public Sector Economics. The program is designed so that suitably qualified full-time students can complete it in one year.

### 5.7.1 Qualifications for Admission

To be considered for admission, an applicant must normally have completed an undergraduate degree in economics at a Canadian university with at least second-class Honours standing, or its equivalent. Satisfaction of this criterion does not guarantee admission and, if admitted, students may be required to complete specified undergraduate courses as deemed necessary by the Department.

Applicants who do not satisfy the criterion above may also be considered for admission but, if admitted, will be required to complete specified undergraduate courses as deemed necessary by the Department.

### 5.7.2 Programs of Study

#### 1. Non-Thesis Option

- a. The program of study requires, in addition to any specified undergraduate courses, completion of 24 credit hours in graduate economics courses, and a master's essay course. The maximum time normally permitted for students to satisfy these requirements is three years.
- b. The 24 credit hours in graduate courses consist of 9 credit hours in core courses: Economics 6000, 6001 and 6002, and 15 credit hours in other courses from those offered by the Department in Natural Resource Economics and Public Sector Economics. Normally, the 24 required credit hours in graduate courses must be completed before the essay.
- c. The master's essay, Economics 6999, must be in the area relating to the courses taken by the student. Students will be assigned a supervisor, who will approve the topic; the essay will be graded by the supervisor and one other member of the Department. The essay must be completed during the semester in which the student is registered in Economics 6999. During that time, students may be required to give a departmental seminar on their essays.

#### 2. Thesis Option

- a. The thesis option consists of 18 credit hours and a thesis. The thesis will consist of a comprehensive study in the area of the student's field courses. The thesis must embody systematic research and demonstrate a mastery of economic principles and their application. Thesis work will be completed under a supervisor from the Department.
- b. The thesis must normally be completed within the two years following completion of 18 required credit hours, which must include Economics 6000, 6001 and 6002.
- c. The thesis will normally be evaluated internally and in accordance with the requirements of the School of Graduate Studies.

**Courses**

The following courses will be offered to meet the requirements of candidates, as far as resources of the Department will allow.

**Core Courses**

6000 Advanced Micro-economic Theory  
6001 Advanced Macro-economic Theory  
6002 Econometrics

**Public Sector Economics Courses**

6010 Taxation  
6011 Expenditure  
6012 Cost-benefit Analysis  
6013 Fiscal Federalism  
6014 Topics in Public Sector Economics

**Natural Resource Economics Courses**

6020 Economics of Nonrenewable Natural Resources  
6021 Economics of Renewable Natural Resources  
6022 Environmental Economics  
6023 Advanced Fisheries Economics  
6024 Topics in Resource Economics

**Master's Essay Course**

6999 Master's Essay

Note: *Additional courses may be arranged, so far as the exigencies of the Department allow, to meet the particular needs of candidates.*

**5.8 English Language and Literature****Associate Professor and Interim Head of the Department**

R. Hollett

The degrees of Master of Arts and Doctor of Philosophy are offered in English Language and Literature.

Candidates for the M.A. in English may complete the program as either part-time or full-time students. Candidates for the Ph.D. in English must be in attendance as full-time students for at least three semesters of the program.

**5.8.1 Master of Arts**

1. Admission to the M.A. in English is limited and competitive. Applicants should have an Honours B.A. in English (or the equivalent, 60 credit hours in English with an appropriate range of courses) and a strong academic record.
2. Strong candidates who have come close to achieving Honours equivalency may be admitted on the condition that they complete such undergraduate courses as the Department may deem necessary, in addition to the required graduate courses.
3. Candidates who have not completed English 4900 or an equivalent course will be required to complete English 5900 which will not count as one of the required courses for the M.A. The course will be graded "pass" or "fail". As in other graduate courses a grade of 65 or above is considered a pass.

**5.8.2 Program of Study****1. Thesis Option**

- a. Candidates completing the M.A. with thesis will complete a minimum of 15 credit hours in graduate courses, which will normally include English 7003, and a thesis.
- b. Candidates must submit a thesis proposal which includes a statement of topic, a working title, a plan of research, and a preliminary bibliography. The proposal should be approved by the Supervisor or Supervisors and submitted to the departmental Graduate Studies Committee for its approval by the end of the candidate's third semester. The departmental Graduate Studies Committee shall return the thesis proposal to the candidate no later than one month after receiving it.
- c. Full-time students who choose the thesis option will usually complete their degree in two years.

**2. Non-Thesis Option**

- a. Candidates completing the M.A. without thesis will complete a minimum of 24 credit hours in graduate courses, which will normally include English 7003.
- b. Full-time students who choose the non-thesis option will usually complete their degree in one year.

**Courses**

A selection of the following graduate courses will be offered to meet the requirements of candidates, as far as the resources of the Department will allow.

- Notes:
1. *Since it is impossible to list in detail the many topics that may from time to time be offered, the titles below refer only to the major periods and general subject areas in which specific courses may be available. The content and approach in specific courses will vary according to the research interests of students and faculty involved in the course. Students should consult the Department's annual Graduate Student Guide (or the Graduate Co-ordinator) for detailed descriptions of specific course offerings. Normally, no fewer than ten graduate courses are offered in any given academic year.*
  2. *English 5900 cannot be counted as one of the required graduate courses in any program.*
  3. *All students will normally take English 7003 - Trends in Contemporary Literary Theory, usually in their first semester.*
  4. *Students who took graduate courses in English at Memorial before 1997 should consult with the Department before selecting further courses.*

**Courses**

5900 Bibliography and Research Methods  
6403 Etymology (same as Linguistics 6403)  
6420 English Dialectology I  
6421 English Dialectology II  
6999 Master's Essay (for non-thesis students)  
7003 Trends in Contemporary Critical Theory  
7004 English Phonology and Morphology  
7005 The Syntactic Structure of English  
7031 English Phonology & Morphgy

7032 Studies in Old English I  
 7033 Studies in Old English II  
 7034 Studies in Middle English I  
 7035 Studies in Middle English II  
 7036 Studies in Middle English III  
 7037 Studies in 16th-Century Literature I  
 7039 Studies in 16th-Century Literature III  
 7040 Studies in 16th-Century Literature IV  
 7041 Studies in 17th-Century British Literature I  
 7042 Studies in 17th-Century British Literature II  
 7043 Studies in 17th-Century British Literature III  
 7044 Studies in 17th-Century British Literature IV  
 7045 Studies in 18th-Century British Literature I  
 7047 Studies in 18th-Century British Literature III  
 7048 Studies in 18th-Century British Literature IV  
 7049 Studies in 19th-Century British Literature I  
 7050 Studies in 19th-Century British Literature II  
 7051 Studies in 19th-Century British Literature III  
 7052 Studies in 19th-Century British Literature IV  
 7053 Studies in 20th-Century British Literature I  
 7054 Studies in 20th-Century British Literature II  
 7055 Studies in 20th-Century British Literature III  
 7056 Studies in 20th-Century British Literature IV  
 7057 Studies in Pre-19th Century American Literature  
 7058 Studies in 19th Century American Literature I  
 7059 Studies in 19th-Century American Literature II  
 7060 Studies in 19th-Century American Literature III  
 7061 Studies in 20th-Century American Literature I  
 7063 Studies in 20th-Century American Literature III  
 7064 Studies in 20th-Century American Literature IV  
 7065 Studies in Pre-19th Century Canadian Literature  
 7066 Studies in 19th-Century Canadian Literature I  
 7067 Studies in 19th-Century Canadian Literature II  
 7068 Studies in 19th-Century Canadian Literature III  
 7069 Studies in 20th-Century Canadian Literature I  
 7070 Studies in 20th-Century Canadian Literature II  
 7071 Studies in 20th-Century Canadian Literature III  
 7072 Studies in 20th-Century Canadian Literature IV  
 7073 Studies in Newfoundland Literature I  
 7074 Studies in Newfoundland Literature II  
 7075 Studies in Newfoundland Literature III  
 7076 Studies in Anglo-Irish Literature I  
 7077 Studies in Anglo-Irish Literature II  
 7078 Studies in Modern Drama  
 7079 Studies in Post-Colonial Literature I  
 7081 Studies in Post-Colonial Literature III  
 7082 Studies in Critical Theory I  
 7083 Studies in Critical Theory II  
 7084 Studies in Critical Theory III  
 7085 Special Readings in English I  
 7086 Special Readings in English II  
 7087 Special Readings in English III  
 7020-25 Special Topics in English

## 5.9 Ethnomusicology

### Professor and Director of the School of Music

Tom Gordon

### Professor and Program Coordinator

Beverley Diamond

The Master of Arts program in Ethnomusicology is administered by the School of Music in consultation with the Department of Folklore, and generally in response to recommendations from an Interdisciplinary Advisory Committee with representation from both academic units, chaired by the Program Coordinator.

The degree of Master of Arts in Ethnomusicology is offered by part-time and full-time study. While it is normally a course work degree, a thesis option is available upon application. Fieldwork is often a requirement both for independent research and course work. The resources of the Memorial University Folklore and Language Archive are available to graduate students in Ethnomusicology.

### 5.9.1 Qualifications for Admission

Applicants may be admitted to the program if they have at least a B+ average with a B.Mus. degree or other degree in the Humanities or Social Sciences with evidence of specialization in music. Applicants whose professional music training took place outside the university system are also encouraged to apply, provided they have the academic equivalent of the qualifications described above. Applicants from a discipline other than Music will be expected to demonstrate the following skills:

- Competent performance in any musical tradition, as judged by a musician knowledgeable about that tradition.
- Knowledge of culturally appropriate language for discussion of performance techniques in that tradition.
- Ability to discuss musical details on the basis of aural and/or written sources, as appropriate to that tradition.

Candidates for admission may, at the discretion of the Interdisciplinary Advisory Committee, be required to write diagnostic examinations measuring skills and knowledge in music literacy, theory, or aural perception. Candidates with deficiencies in any of these areas may be required to take remedial course work prior or in addition to the required program.



## 5.9.2 Program Requirements

The M.A. program will normally be completed within five consecutive semesters of full-time study. The degree is normally taken by completing course work and a major research paper. In special circumstances, a student may apply to complete the degree by completing course work and a thesis. Demonstration of competence in a language other than English may be required if warranted by the research proposed by the student.

### 1. Course work M.A.

- a. Students must normally complete a minimum of 24 credit hours plus a major research paper (Music 7002). Further courses beyond the minimum number may be required, depending on the background of the student. The required courses are:
  - i. Music 7001; Folklore 6010, 6030.
  - ii. One of Folklore 6100 or Music 6002.
  - iii. One area or genre studies course (3 credit hours) relevant to the research of the student.
  - iv. Nine credit hours to be selected from the Music and Folklore courses listed below (with the approval of the Interdisciplinary Advisory Committee); one elective (3 credit hours) may be a relevant course offered in another discipline (with the approval of the Interdisciplinary Advisory Committee).
- b. Research paper (Music 7002) on a topic chosen by the student with his/her supervisor's approval. Proposals for topics and supervisors will be vetted by the Interdisciplinary Advisory Committee no later than the beginning of the third term of study. The paper will normally demonstrate the student's ability to apply methodologies and theoretical constructs, learned in the courses taken, to a specific repertory, or performance context.

### 2. Thesis M.A. (available by special application to the Interdisciplinary Advisory Committee)

- a. Students must normally complete a minimum of 21 credit hours plus a thesis. The required courses are:
  - i. Music 7001; Folklore 6010, 6030.
  - ii. One of Folklore 6100 or Music 6002.
  - iii. One area or genre studies course (3 credit hours) relevant to the research of the student.
  - iv. Six credit hours to be selected from the Music and Folklore courses listed below (with the approval of the Interdisciplinary Advisory Committee); one elective (3 credit hours) may be a relevant course offered in another discipline (with the approval of the Interdisciplinary Advisory Committee).
- b. Thesis submitted in accordance with General Regulation **Theses and Reports** of the School of Graduate Studies. A thesis proposal, consisting of a statement of topic, working title, plan of research, and preliminary bibliography, with the name of the preferred supervisor, shall be submitted by the candidate to the Interdisciplinary Advisory Committee no later than the beginning of the third term of study.

### Courses

#### Theories and Methods:

Music 6001 Research Methods  
 Music 6002 Graduate Seminar  
 Music 7001 Research Problems and Methods in Ethnomusicology  
 Music 7002 Research Paper  
 Folklore 6010 Survey of Folklore Genres and Processes  
 Folklore 6020 Field and Research Methods  
 Folklore 6030 Folklore Theories  
 Folklore 6040 Feminist Theories: Perspectives and Issues  
 Folklore 6080 Vernacular Theories  
 Folklore 6090 Ethnology  
 Folklore 7100 Advanced Folkloristics II: Research and Ethnography

#### Form and Performance:

Music 7005 Performance Option  
 Folklore 6100 Song and Music  
 Folklore 6120 Ballad  
 Folklore 6130 Folk Music Canons and Documentary Sound Recordings  
 Folklore 6200 Folktale  
 Folklore 6210 Legend  
 Folklore 6220 Personal Experience Narrative  
 Folklore 6250 Language and Play  
 Folklore 6260 Ethnography of Communications  
 Folklore 6300 Ethnography of Belief  
 Folklore 6310 Health Systems  
 Folklore 6350 Custom  
 Folklore 6360 Traditional Drama  
 Folklore 6400 Material Culture  
 Folklore 6410 Vernacular Architecture  
 Folklore 6420 Art and the Artifact  
 Folklore 6430 Food and Culture  
 Folklore 6720 Folklore and Literature

#### Area and Genre Studies:

Music 7010 World Music: Music of Asia and Oceania  
 Music 7011 World Music: Music of Africa and the Americas  
 Music 7012 Canadian Musical Traditions  
 Music 7013 Music and Culture  
 Music 7017 Folksong  
 Music 7018 Jazz and Blues: The Roots of Popular Music  
 Folklore 6120 Ballad  
 Folklore 6600 Folklore of Newfoundland  
 Folklore 6610 Folklore of Canada  
 Folklore 6620 Folklore of the United States  
 Folklore 6630 Folklore of the British Isles

Folklore 6770 The Global and the Local

**Social Identities:**

Music 7006 Urban Ethnomusicology  
 Music 7007 Music in the Study of Gender, Race and Class  
 Music 7009 Music and Place  
 Folklore 6510 Occupational Folklore  
 Folklore 6551 Indigenous Expressive Cultures in Cross-cultural Encounter  
 Folklore 6730 Folklore and Gender  
 Folklore 6780 Ethnicities

**Public and Applied Ethnomusicology and Folklore:**

Music 6700 Music Industries Seminar  
 Music 6750 Music Industries Internship (2 cr. hrs.)  
 Folklore 6740 Public Sector Folklore  
 Folklore 6760 Archiving  
 Folklore 6790 Museums: Perspectives and Practices  
 Folklore 6800 Applied Folklore

**Interdisciplinary Perspectives:**

Music 7008 Media Studies  
 Folklore 6700 Folklore and Culture  
 Folklore 6710 Oral Tradition and Oral History  
 Folklore 6750 Popular Culture: Theory and Debate

**Independent Study:**

Music 7026-29 Directed Reading in Ethnomusicology  
 Folklore 6570-79 Reading Courses in Folklore

**Special Topics:**

Music 6800-09 Special Topics in Music  
 Music 7800-09 Special Topics in Music  
 Folklore 6511-29 Special Topics in Folklore  
 Folklore 6570-79 Reading Course in Folklore

## 5.10 Folklore

**Associate Professor and Head of the Department**

M. Lovelace

The degree of Master of Arts in Folklore is offered by part-time and full-time study and is a combined course work and research degree. The program normally requires extensive fieldwork research in Newfoundland and/or the Maritimes.

Integral to the teaching of the Department of Folklore is work of the Memorial University of Newfoundland Folklore and Language Archive; see following section.

### 5.10.1 Master of Arts

1. Applicants may be admitted to the graduate program if they have an average of at least grade "B" in no fewer than 36 credit hours in Folklore or in any other discipline in the Humanities or Social Sciences.
2. The M.A. program will normally be completed within six consecutive semesters (i.e. a two-year period). The degree of Master of Arts in Folklore may be taken by course work and comprehensive examination or by course work and thesis. Both options are available to full-time and part-time students.
  - a. **M.A. with thesis:**
    - i. Students choosing to do the M.A. with thesis must normally complete a minimum of 24 credit hours plus a thesis. The required courses are:
      - 6010, 6020, and 6030, normally taken as an integrated foundation in the Fall semester.
      - At least one of the following: 6100, 6120, 6130, 6200, 6210, 6220, 6250, 6260, 6360, 6720.
      - At least one of the following: 6300, 6310, 6350, 6370, 6400, 6410, 6420, 6430.
      - Nine additional credit hours to be selected from courses in the groups listed above or from the other courses offered by the Department.
    - ii. A brief thesis pre-proposal, including a statement of topic, working title, plan of research, ethics statement, preliminary bibliography, and the name of a preferred Supervisor, shall be submitted no later than the end of the candidate's second semester. A full proposal shall normally be submitted to the Department of Folklore at the end of the candidate's fourth semester. Following approval of the thesis proposal and consultation with the candidate, the Supervisor and thesis topic will be recommended to the Dean.
  - b. **M.A. without thesis:**
    - i. Students choosing to do the M.A. without thesis must normally complete a minimum of 30 credit hours plus comprehensive examination. The required courses are:
      - 6010, 6020, and 6030, normally taken as an integrated foundation in the Fall semester.
      - At least one of the following: 6100, 6120, 6130, 6200, 6210, 6220, 6250, 6260, 6360, 6720.
      - At least one of the following: 6300, 6310, 6350, 6370, 6400, 6410, 6420, 6430.
      - Fifteen additional credit hours to be selected from courses in the groups listed above or from the other courses offered by the Department. ii Each candidate selecting the M.A. without thesis option shall normally submit, by the end of the candidate's second semester, written notification of intention to take comprehensives.
    - ii. Each candidate selecting the non-thesis option shall normally write the comprehensive examination at the end of the candidate's fifth semester in the program. The comprehensive examination will be graded by a comprehensive examination committee appointed by the Dean of Graduate Studies on the recommendation of the Head of the Department, in accordance with GENERAL REGULATIONS governing the School of Graduate Studies.

**Courses**

A selection of the following graduate courses will be offered to meet the requirements of candidates, normally after consultation with the Head of the Department or the Graduate Studies Administrator, and as far as the resources of the Department will allow. Courses are structured according to the categories of: Theories and Methods, Issues, Form and Performance, Special Topics, Regional, National and International Heritage, Social Identities, Public and Applied Folklore, Interdisciplinary Perspectives, and Required (Ph.D.):

**Theories and Methods**

6010 Survey of Folklore Genres and Processes  
 6020 Field and Research Methods  
 6030 Folklore Theories  
 6040 Feminist Theories: Perspectives and Issues  
 6080 Vernacular Theories  
 6090 Ethnology

**Issues**

6050 Issues in Folkloristics  
 6060 Issues in Folk Literature  
 6070 Issues in Folklife

**Form and Performance**

6100 Song and Music  
 6120 Ballad  
 6130 Folk Music Canons and Documentary Sound Recordings  
 6200 Folktale  
 6210 Legend  
 6220 Personal Experience Narrative  
 6250 Language and Play  
 6260 Ethnography of Communications  
 6300 Ethnography of Belief  
 6310 Health Systems  
 6350 Custom  
 6360 Traditional Drama  
 6370 Ritual, Festival and Public Display  
 6400 Material Culture  
 6410 Vernacular Architecture  
 6420 Art and the Artifact  
 6430 Food and Culture  
 6720 Folklore and Literature

**Special Topics**

6511-29 Special Topics in Folklore  
 6550 Special Research in Folklore  
 6551 Indigenous Expressive Cultures in Cross-cultural Encounter  
 6552-69 Special Research in Folklore  
 6570-79 Reading Course in Folklore

**Regional, National and International Heritage**

6600 Folklore of Newfoundland  
 6610 Folklore of Canada  
 6620 Folklore of the United States  
 6630 Folklore of the British Isles  
 6640 Traditional Culture of Scotland  
 6650 Culture and Traditions of Ireland  
 6660 Folklore of the Francophone Regions  
 6690 International Folklore

**Social Identities**

6510 Occupational Folklife  
 6730 Folklore and Gender  
 6770 The Global and the Local  
 6780 Ethnicities

**Public and Applied Folklore**

6740 Public Sector Folklore  
 6760 Archiving  
 6790 Museums: Perspectives and Practices  
 6800 Applied Folklore

**Interdisciplinary Perspectives**

6700 Folklore and Culture  
 6710 Oral Tradition and Oral History  
 6750 Popular Culture: Theory and Debate

**Required (Ph.D.)**

7000 Advanced Folkloristics I  
 7100 Advanced Folkloristics II Research and Ethnography

Note: *Credit may not be obtained for both 6010 and the former 6110; 6020 and the former 6111; 6030 and the former 6112; 6100 and the former 6430; 6120 and the former 6445; 6300 and the former 6230; 6350 and the former 6230; 6400 and the former 6501; 6720 and the former 6460.*

**5.10.2 Folklore and Language Archive****Chairman, Advisory Committee**

Interim Dean of Arts, S.B. Wolinetz

**Director**

Martin J. Lovelace

**Archivist**

Patricia Fulton

**Honorary Research Associate (Folklore)**

(Mrs.) Violetta M. Halpert

**Honorary Research Associate (Language and Folklore)**

J.D.A. Widdowson

The Memorial University of Newfoundland Folklore and Language Archive was a joint creation of the Departments of Folklore and English Language and Literature. It was set up to co-ordinate diverse research in Newfoundland studies undertaken in both Departments, to facilitate the mutual use of common material, to organize it for research and publication, and to make a permanent documented record for future generations. The Folklore and Language Archive is an integral part of the teaching and research activities of the Department of Folklore on both the graduate and undergraduate levels.

The Archive comprises extensive collections of Newfoundland and Labrador folksongs and music, folk narratives of many kinds, oral history, folk customs, beliefs and practices, childlore and descriptions of material culture. It has special collections of the Newfoundland vocabulary, proverbs and riddles and collections towards a linguistic atlas. The materials have been collected by a variety of means: by questionnaires, by student contributions in manuscript, by extensive field work utilizing tape recorders, and by searching printed sources.

The Archive is housed in the G.A. Hickman Building. Associated with it is a recording room, with facilities for copying tapes and records and for the making of recordings. The specially excerpted collection in language is housed in the English Language Research Centre of the Department of English Language and Literature. Newfoundland French language and folklore materials are housed in the Centre d'Etudes Franco-Terreneuviennes in the Department of Folklore. Each Department has a working library associated with the archival material.

## 5.11 French

**Professor and Head of Department**

M. O'Reilly

1. The degree of Master of Arts in French Studies may be completed by full-time or part-time study. "French Studies" may take the form of the study of the French language or of francophone literature, including the study of literary history, criticism or theory. It may also include the study of French-language cinema or of other aspects of francophone civilization.
2. Applicants for the M.A. program in French Studies are normally expected to have completed the Honours degree with a second-class standing or better. An applicant who does not hold an Honours degree or its equivalent may be required to complete such additional undergraduate courses as the Department considers necessary, prior to admission or as part of the program.
3. The M.A. program in French Studies will consist of 15 credit hours in graduate courses (normally requiring 2 or 3 semesters of full-time study), plus research activities and a thesis of approximately 80 pages. The 15 credit hours shall include 6008 and 6009, normally completed in consecutive semesters. The remaining 9 credit hours shall be obtained by completion of three courses chosen from those in three of the five groups listed in the **Courses** section below. The language of the thesis will be French. The thesis proposal, after being approved by the supervisor, will be submitted by the candidate, normally before the end of the third semester of studies, to the departmental Graduate Studies Committee, who will decide whether or not to grant its approval.
4. Each candidate's program of study must be approved by the departmental Graduate Studies Committee.
5. A paper drawn from the thesis will be presented at a departmental seminar or in another forum approved by the departmental Graduate Studies Committee. Normally, this presentation will take place at some time between submission of the final draft thesis to the supervisor and the submission of the thesis to the School of Graduate Studies.
6. The approval of the departmental Graduate Studies Committee must be obtained before the thesis is forwarded to the School of Graduate Studies for examination.
7. In the final version of the M.A. thesis and other written assignments for M.A. courses, the quality of written French must be of a standard acceptable to the department as represented by the Graduate Studies Committee. Normally, this will mean that the final version of such assignments will be free of spelling, lexical, and grammatical errors, and of improper use of stylistic conventions. In the case of the M.A. thesis, this requirement applies to the version submitted for examination.

**Courses**

A selection of the following graduate courses will be offered to meet candidates' requirements, as far as the resources of the Department will allow:

6008\* Literary Methodology and Theory (Critical and Theoretical Methodology (I))

6009\* Literary Methodology and Theory (Critical and Theoretical Methodology (II))

**Historiographical, Genetic, Thematic, Hermeneutical or other historical or critical approaches to French Studies**

6032 Genetic Criticism and Exegesis

6102 History of the French Language

**Psychoanalytical, Ethnological or Anthropological approaches to French Studies**

6020 Literature and Psychoanalysis

6021 Mythocriticism

6130-39 Personal/Intimate Literature

**Sociological or Socio-historical approaches to French Studies**

6022 History, Society, Ideology and Texts

6101 The Female Voice; Women's Writing and its Contribution to the Development of French and Francophone texts

6110-19 Paraliterature and Traditional Culture

**Linguistic, Semiotic, Poetic, Rhetorical or Pragmatic approaches to French Studies**

6011 General Theory of the French Language

6030 Grammar of the Text

6031 Narratology

6140-49 Genres and Discursive Forms

**Other approaches to French Studies**

6120-29 Texts/Images/Sounds

6150-59 Special Topics

Note: \*Credit may not be obtained for both French 6008 and the former French 6006; or for both French 6009 and the former French 6006.

**FRANÇAIS****Professeur et directeur du département**

M. O'Reilly

1. Le diplôme de Maîtrise ès Arts en Études françaises sanctionne des études à temps plein ou à temps partiel. Les études françaises comprennent l'étude de la langue et de la littérature et l'étude de l'histoire, de la critique ou de théorie littéraire, ainsi que l'étude du cinéma ou d'autres aspects des civilisations francophones.
2. Pour être admis au programme de Maîtrise ès Arts en Études françaises, l'étudiant doit normalement détenir un diplôme de baccalauréat avec une spécialisation en Études françaises et une note moyenne d'au moins B. Le département pourra obliger toute personne ne détenant pas ce diplôme ou son équivalent à suivre certains cours du premier cycle avant d'être admis au programme de deuxième cycle ou pendant ses études de maîtrise.
3. L'option en Études littéraires comprend quinze crédits de cours, ce qui exigera normalement 2 ou 3 trimestres d'études à temps plein et un mémoire d'environ 80 pages rédigé en français. Tous les candidats compléteront le Fr.6008 et le Fr.6009.  
Normalement, ces deux cours devront être complétés en deux trimestres consécutifs. En plus, il faudra compléter 3 cours choisis parmi ceux qui font partie de 3 des 5 groupes identifiés dans la section **COURS**. Le projet de mémoire, qui est approuvé par son directeur, doit être officiellement présenté par le candidat au Comité des Études de deuxième cycle, avant la fin du troisième trimestre, pour son approbation.
4. Le programme d'études du candidat doit être approuvé par le Comité des Études de deuxième cycle.
5. Une communication tirée du mémoire sera présentée dans le cadre des séminaires départementaux ou dans une autre réunion approuvée par le Comité des Études de deuxième cycle. Normalement, cette présentation se fera entre la soumission à son directeur et sa soumission définitive à l'École des Études supérieures.
6. Avant d'être soumis à l'École des Études supérieures, le mémoire doit être proposé au Comité des Études de deuxième cycle, qui doit en autoriser le dépôt.
7. Dans la version finale du mémoire et des autres travaux préparés pour les cours de maîtrise, la qualité du français écrit doit être d'un niveau acceptable au département, qui est représenté par le Comité des Études de deuxième cycle. Ainsi, la version finale de ces travaux ne contiendra-t-elle pas, normalement, d'erreurs orthographiques, lexicales, grammaticales, stylistiques et protocolaires. Pour ce qui est du mémoire, cette exigence s'applique à la version remise aux examinateurs.

**COURS**

Un choix des cours de deuxième cycle suivants sera offert afin de répondre aux besoins des étudiants inscrits au programme de maîtrise selon les ressources disponibles au département:

6008\* Méthodologie et théorie de la littérature (Méthodes critiques et théoriques I)

6009\* Méthodologie et théorie de la littérature (Méthodes critiques et théoriques II)

**Approche historiographique, génétique, thématique, herméneutique ou autrement historique ou critique:**

6032 Génétique et critique

6102 Histoire de la langue française

**Approche psychanalytique, ethnologique ou anthropologique:**

6020 Psychanalyse et littérature

6021 Mythocritique

6130-39 Littérature personnelle/intime

**Approche sociologique ou socio-historique:**

6022 Histoire, société, idéologie et textes

6101 La voix féminine et le féminisme

6110-19 Paralittérature et cultures traditionnelles

**Approche linguistique, sémiotique, poétique, rhétorique ou pragmatique:**

6011 Théorie générale de la langue française

6030 Grammaire du texte

6031 Narratologie

6140-49 Discours et genres

**Autres approches aux Études françaises:**

6120-29 Textes/Images/Sons

6150-59 Sujets spéciaux

\* Nota / Note: *Les étudiants ne peuvent obtenir de crédit pour le Français 6008 et le Français 6006 (désormais supprimé) ni pour le Français 6009 et le Français 6006.*

**5.12 Geography****Associate Professor and Head of the Department**

K. Storey

1. The degrees of Master of Arts and Master of Science are offered in Geography by full-time or part-time study.
2. Admission requirements are set forth in the **General Regulations** of the School of Graduate Studies and Degree Regulations for Master of Arts and Master of Science.
3. The deadline for submission of applications for admission is January 15. Candidates will normally commence their programs in the Fall semester.
4. An applicant will be admitted to a graduate program only if a faculty member agrees to act as supervisor. A supervisory committee will be established after admission, normally consisting of the supervisor and two other individuals, one of whom will normally be a member of the Department.
5. Major research areas for graduate study at the master's level are cultural, historical, economic, urban, resource management, regional development, geomorphology, Quaternary environments, climatology and geographic information sciences.
6. Candidates will register for the M.A. program if their fields of interest lie in an area of Human Geography or for the M.Sc. if their fields of interest are in Physical Geography or Geographic Information Sciences.
7. It is expected that the program of study and research for the M.A. or M.Sc. will normally be completed in a maximum of two years of full-time work, or three years of part-time work.
8. Candidates must successfully complete a minimum of 12 credit hours of graduate program courses with a minimum grade of B in

each. Geography 6000 will be a required course for all candidates who have not already completed an equivalent course at the Honours or post-graduate level.

9. Candidates whose undergraduate degree is not in geography will be required to complete some additional undergraduate program courses during their first year of study, in addition to the required graduate program courses. Normally four such undergraduate courses will be required, and a minimum grade of 70% must be obtained in each.
10. Each candidate will be required to present a seminar on their research to the Department.
11. Each candidate must submit a thesis based on their own original research. This thesis will be examined in accordance with the **General Regulations** of the School of Graduate Studies.

### Courses

A selection of the following graduate courses will be offered to meet the requirements of candidates as far as the resources of the Department will allow:

6000 Development of Geographical Thought  
 6100 Research Techniques in A Selected Field of Geography I  
 6101 Research Techniques in A Selected Field of Geography II  
 6120 Spatial Pattern Analysis and Computer Mapping  
 6150 Environmental Remote Sensing and Image Analysis  
 6200 Economic Geography I: Location Theory  
 6201 Economic Geography II: Regional Development  
 6202 Economic Geography III: Problems in Transportation  
 6203 Economic Geography IV: Land Use Pattern Analysis  
 6250 Conservation of Natural Resources  
 6300 Problems in Fisheries Geography  
 6301 Methodologies of Fisheries Geography  
 6400 Fluvial Geomorphology  
 6401 Glacial Geomorphology  
 6403 Hydrology  
 6410 Climatology  
 6420 Chronologies in Physical Geography  
 6430 Biogeography  
 6500 Cultural Geography  
 6510 Ethnic Group Settlement in the New World  
 6550 Population  
 6600 Historical Geography  
 6700 Political Geography  
 6800 Urban Geography  
 6801 Spatial Aspects of Urbanization and City System Development  
 6802 Internal Structure of Cities  
 6820 Cartographic Design  
 6830 Cartographic Production  
 6900 Graduate Seminar in Regional Geography  
 6990-95 Special Topics in Geography

## 5.13 German

### Associate Professor and Head of the Department

R. Ilgner

The degrees of Master of Arts and Master of Philosophy are offered in German Language and Literature and may be taken by full-time or part-time study. No graduate work is offered in Russian at this time.

1. Candidates for the M.A. degree in German are normally expected to have completed an Honours degree with a minimum of second-class standing. In addition to the general requirements, candidates will be expected to have acquired a superior knowledge of the spoken and written language and may, depending on their academic background and field of specialization, be asked to take advanced undergraduate courses.
2. All candidates will complete at least 15 credit hours and a thesis in accordance with the Graduate Studies **General Regulations** for the M.A. and at least 30 credit hours for the M.Phil., and the entire program of study and research will normally be of two-years' duration.

### Courses

A selection of the following graduate courses will be offered to meet the requirements of candidates, as far as the resources of the Department will allow:

6000 German Civilization I  
 6001 German Civilization II  
 6100 History of the German Language I  
 6101 History of the German Language II  
 6200 Medieval German Literature I  
 6201 Medieval German Literature II  
 6300 German Literature, 1500-1700 I  
 6301 German Literature, 1500-1700 II  
 6400 German Literature of the Enlightenment and Storm and Stress I  
 6401 German Literature of the Enlightenment and Storm and Stress II  
 6500 German Classicism I  
 6501 German Classicism II  
 6600 German Romanticism I  
 6601 German Romanticism II  
 6700 German Realism I  
 6701 German Realism II  
 6800 German Literature, 1880-1933 I  
 6801 German Literature, 1880-1933 II  
 6900 Contemporary German Literature I

6901 Contemporary German Literature II  
 7000 Special Subject or Author I  
 7001 Special Subject or Author II  
 7002-7020 Special Topics in German Studies

## DEUTSCH

### Professor und Vorstand der Abteilung

R. Ilgner

Auf dem Gebiet der Germanistik werden die Grade Master of Arts (Magister Artium) und Master of Philosophy (Magister Philosophiae) geboten. Sie können sowohl von voll- wie auch von halbzweijährig Studierenden erworben werden. Auf dem Gebiet der Slawistik wird z.Zt. kein weiterführendes Studium geboten.

1. Kandidaten für den Master of Arts sollten ein Honoursprogramm absolviert und mindestens mit einem "B" abgeschnitten haben. Ausser den allgemeinen Zulassungsbestimmungen wird von den Kandidaten überdurchschnittliche Kenntnis des Deutschen in Sprache und Schrift erwartet. Ihrer akademischen Vorbildung und ihrem Fachgebiet entsprechend kann ihnen eventuell geraten werden, gleichzeitig fortgeschrittene Kurse der Unterstufe zu belegen.
2. Für den Master of Arts sind mindestens 15, für den Master of Philosophy mindestens 30 Kreditstunden zu absolvieren. Das ganze Studienprogramm dauert normalerweise zwei Jahre.

## KURSE

Von den hier aufgeführten Kursen für Graduierte wird jeweils eine Auswahl angeboten, die sowohl den Anforderungen des Studierenden wie den Möglichkeiten der Abteilung gerecht wird.

6000 Deutsche Kulturkunde I  
 6001 Deutsche Kulturkunde II  
 6201 Mittelhochdeutsche Literatur II  
 6501 Deutsche Klassik II  
 7000 Wahlthema oder-Autor I  
 7001 Wahlthema oder-Autor II  
 7002-7020 Wahlthemen in German Studies

## 5.14 History

### Professor and Head of the Department

C. Youé

The degrees of Doctor of Philosophy and Master of Arts are offered in History by full-time or part-time study.

### 5.14.1 Master of Arts

1. Studies at the MA level are available in Canadian and maritime history, in the history of Newfoundland and Labrador, and in the history of the North Atlantic, the United States, Britain, Germany and France.
2. Candidates for the MA shall complete a minimum of 24 credit hours, 18 of which shall normally be 6180, 6200, 6210 and 6999.

### Courses

A selection of the following graduate courses will be offered to meet the requirements of candidates as far as the resources of the Department will allow:

6000 Advanced Studies in Newfoundland History  
 6010 Advanced Studies in Canadian History  
 6020 Advanced Studies in the History of the United States  
 6030 Advanced Studies in French History  
 6040 Advanced Studies in British History  
 6050 Advanced Studies in German History  
 6060 Advanced Studies in North Atlantic History  
 6070 Advanced Studies in Social History  
 6075 Advanced Studies in Labour and Working-Class History  
 6080 Advanced Studies in Intellectual History  
 6090 Advanced Studies in Women's History  
 6095 Advanced Studies in Ethnohistory  
 6100 Advanced Studies in Military History  
 6105 Advanced Studies in Diplomatic History  
 6110 Advanced Studies in Maritime History  
 6120 Advanced Studies in Economic and Business History  
 6125 Medical Science and Social Responsibility in Health Care: Aspects of Medical History (*cross listed as Medicine 6420*)  
 6130 Quantification and Measurement in History  
 6140-59 Research in Special Topics  
 6160-79 Reading Courses (Special Topics)  
 6180 Seminar in Historiography  
 6200 Masters Seminar I  
 6210 Sources, Methods and Criticism: Practising History  
 6999 Masters Research Paper (9 credit hours)

## 5.15 Linguistics

### Associate Professor and Head of the Department

M. Mackenzie

The degrees of Master of Arts and Doctor of Philosophy are offered in Linguistics.

### 5.15.1 Master of Arts

1. The Linguistics department offers the M.A. program with both a thesis and a non-thesis option. The M.A. with thesis option is intended for those who have completed an undergraduate major in Linguistics with satisfactory standing (a B+ average in Linguistics

courses). Students interested in the thesis option who have an excellent undergraduate record and a well-defined research plan, yet who do not possess the equivalent of an undergraduate major, will be required to take additional undergraduate and/or graduate courses in Linguistics. Other students are encouraged to apply for the M.A. without thesis option.

2. The M.A. with thesis option is normally a two-year program consisting of at least 15 credit hours of graduate courses (including Linguistics 7000 and 7001), plus a thesis.
3. The M.A. without thesis option is normally a two-year program consisting of at least 21 credit hours of graduate courses (including Linguistics 7000 and 7001), plus a research project (Linguistics 6999), which consists of a major research paper in an approved area followed by an oral examination.
4. The M.A. in Linguistics requires proficiency in a language other than the candidate's first language, as demonstrated by a minimum B grade in a second-year undergraduate language course, or performance satisfactory to the department in an arranged reading proficiency test. A working or structural knowledge of other languages may also be required for particular programs (e.g., Latin, Greek or Sanskrit for historical Indo-European linguistics, or courses in the series Linguistics 6050-59 or the former 6010-6041).
5. All M.A. students are advised to consult the Linguistics department's Graduate Handbook for details on program requirements and for general information relating to the graduate program.

### Courses

A selection of the following graduate courses will be offered to meet the requirements of students, as far as the resources of the Department will allow. Full information is to be found in the Department's Graduate Brochure.

6001 Issues in Morphosyntax

6050-54 Structure of a North American Aboriginal Language

(Credit restriction: Except where an exemption is supplied by the head of the department, a student may not obtain credit for more than one course in the 6050-54 series. Students may not obtain credit for any of the previously offered 6010, 6011, 6020, 6021, 6030, 6031, 6040, 6041 in addition to a course in the 6050-54 series.)

6055-59 Structure of an Uncommonly-Taught Language (Credit restriction: Except where an exemption is supplied by the head of the department, a student may not obtain credit for more than one course in the 6055-59 series.)

6110 Selected Topics in Transformational Grammar

6115 Topics in the Syntax of a Selected Language (Prerequisite: 6001 or 6110)

6150 Principles of Language Acquisition

6151 Selected Topics in Language Acquisition (Prerequisite: 6150)

6200 Generative Phonology

6201 Selected Topics in Phonology (Prerequisite: 6200)

6210 Sociolinguistics (Credit restriction: A student may not obtain credit for both 6210 and 6211.)

6212 Selected Topics in Language and Gender

6220 Areal and Temporal Variations in Language

6300-9 Special Subjects

6350 General Romance Linguistics

6390 Franco-Canadian

6400 Comparative and Historical Linguistics

6401 Morphosyntactic Change (Prerequisite: 6400)

6403 Etymology (cross listed as English 6403)

6410 Comparative Structure of a Selected Language Family (Prerequisite: 6403 or the former 6011, 6031)

6420 English Dialectology I

6421 English Dialectology II

6430 Selected Topics in Linguistic Variation (Prerequisite: 6211 or 6220)

6500 Field Methods

6601 Modern Linguistic Theories

6700 Experimental Phonetics

6701 Selected Topics in Experimental Phonetics (Prerequisites: 6200, 6700)

6800 Selected Topics in Morphology

6880 Selected Topics in Semantics

6999 MA Research Project

7000 Seminar in Research Methods

7001 Analytical issues in Linguistics

7100 Topics in North American Native Languages (Prerequisites: a course from series 6050-6054 or the former 6011, 6031, 6041)

7200 Advanced Topics in Syntax (Prerequisites: 6110, plus either 6001 or 6115)

7400 Seminar in Comparative and Historical Linguistics (Prerequisite: 6400 or 6410)

7430 Seminar in Linguistic Variation (Prerequisite: 6430)

7800 Seminar in Morpho-semantics (Prerequisite: 6800)

7900-03 Special Topics in Linguistics

Note: *Appropriate equivalent credits may be given for courses taken at the Summer Institute of the Linguistic Society of America, or a similar institute. Students are encouraged to attend these institutes: they should, however, consult the Head of the Department as to what courses may be appropriate for credit.*

## 5.16 Philosophy

### Professor and Head of the Department

J. Bradley

The degree of Master of Arts is offered in Philosophy by full-time or part-time study. The program is designed so that it may be completed in one academic year (three semesters) of full-time study.

The candidate must complete 15 credit hours - 3 credit hours from 6000, 9 credit hours from 6011-6016, any 3 credit hours from 6101-6102 - and a thesis.

Normally, a full-time candidate will complete all the 15 credit hours and submit a thesis proposal by the end of the second semester of study. A minimum of one additional semester will be spent in completing the balance of the program.

### Courses

6000 Graduate Seminar

#### Author Seminars:

6011 Ancient and Medieval Philosophy

6012 Modern Philosophy



6013 Contemporary Philosophy

**Area Seminars:**

6014 Metaphysics

6015 Theory of Knowledge

6016 Ethical and Political Theory

**Tutorials**

6101 Selected Texts

6102 Current Issues

6040-6099 Special Topics

## 5.17 Political Science

**Professor and Interim Head of the Department**

P.G. Boswell

The degree of Master of Arts is offered in Political Science by full-time and part-time study.

**Master of Arts**

The degree of Master of Arts in Political Science may be taken by course work and thesis, course work and internship, or course work only. The thesis and internship options are available to full-time and part-time students. Both options are one-year programs for full-time students. The course work option is available only to part-time students.

1. **M.A. with thesis:**

- a. Students choosing the M.A. with thesis must normally complete a minimum of 18 credit hours in graduate program courses. Twelve credit hours are from required courses: 6000, 6010, 6020, and a subfield survey (one of 6100, 6200, 6300, 6400, 6500, 6600, or 6700). Further courses beyond the minimum number may be required, depending on the background and needs of the student.
- b. Each student choosing the thesis option will submit a thesis on a subject that has been approved by the supervisory committee of the Department.
- c. Students applying for the thesis option must submit a brief (one page maximum) statement of their research interest with their application.

2. **M.A. with internship:**

- a. Students choosing the M.A. with internship must normally complete a minimum of 24 credit hours in graduate program courses. Fifteen credit hours are from required courses: 6000, 6010, 6031, 6790, and a subfield survey (one of 6100, 6200, 6300, 6400, 6500, 6600, or 6700). Further courses beyond the minimum number may be required, depending on the background and needs of the student.
- b. Each student choosing this option will complete, normally in the Spring Semester, a one-semester, full-time internship, 6030, with a political organization, government agency, or voluntary agency. Students registering for 6030 must also register for its co-requisite, 6031. The placement must normally be selected from a list of approved organizations that is maintained by the Department.

3. **M.A. with essay:**

- a. This option is restricted to part-time students. Students choosing the M.A. with course work will complete 24 credit hours in graduate program courses and an essay (6999). Fifteen credit hours are from required courses: 6000, 6010, 6020, a sub-field seminar (one of 6100, 6200, 6300, 6400, 6500, 6600, or 6700), 6790. Further courses beyond the minimum number may be required, depending on the background and needs of the student.
- b. The essay will be in an area relating to the courses taken by the student and will normally apply Political Science concepts and methods to a practical issue in public affairs. Each student will be assigned a supervisor who will approve the topic and direct the research. The essay will be graded by the supervisor and one other member of the Department. The essay must be completed in the term in which the student is registered for Political Science 6999.

**Courses**

A selection of the following graduate courses will be offered to meet the requirements of candidates, as far as the resources of the Department will allow.

6000 Political Science Concepts

6010 Political Science Methods

6020 Research Design

6030 Internship

6031 Applied Political Research (6 credit hours)

6100 Political Philosophy

6200 International Politics

6300 Comparative Politics

6301 European Politics and Public Policy

6350 Political Economy

6400 Political Development

6430 Latin American Politics

6500 Political Behaviour

6600 Newfoundland Politics

6700 Canadian Politics

6710 Intergovernmental Relations

6720 Local Politics

6740 Public Administration

6770 Canadian Provincial Politics

6780 Politics of the Atlantic Provinces

6790 Politics and Administration

6900-10 Special Topics

6999 Master's Essay

## 5.18 Religious Studies

### Associate Professor and Head of the Department

M.P. DeRoche

The degree of Master of Arts is offered in Religious Studies.

1. Admission requirements are set forth in the General Regulations governing the Degree of Master of Arts. An applicant should have completed a minimum of 45 credit hours in Religious Studies courses at the undergraduate level with at least the grade of B in each. An applicant's overall undergraduate program must represent, to the satisfaction of the Department, a solid groundwork for graduate studies.
2. A candidate who does not hold an Honours degree or its equivalent shall be required to complete such additional undergraduate courses as the Department may deem necessary. These courses may be required as prerequisites to admission to the program, or as an additional constituent part of the program, at the discretion of the Department.
3. Upon acceptance into the program, each candidate will be assigned a supervisor, whose duty it shall be to assist the candidate.
4. Normally, the Master of Arts program should take two years to complete, the first of which is to be spent primarily on course work and preparation of a thesis proposal. A student accepted on a part-time basis would normally be expected to take three to five years to complete the program.
5. Students shall normally complete a thesis and a minimum of 12 credit hours in course work.
6. Students may write a thesis in one of the following areas: Hebrew Bible/Old Testament, New Testament, Judaism, East Asian religious traditions, the history of Christianity, the religious history of Canada, the religious history of Newfoundland and Labrador, medieval religious thought, religion and culture, New Age religious movements, Christian ethics, and the philosophy of religion.
7. Before a student begins writing his or her thesis, he/she should submit a thesis proposal to the Graduate Studies Committee of the Department for approval.
8. Students will be required to satisfy the Department as to proficiency in any language or technical facility deemed necessary by the Graduate Studies Committee of the Department for successful completion of the thesis.
9. For the course work students must complete three required courses and at least one other from the course list. The three required courses are: RS 6100 Interpretations of Religion; RS 6120 Studies in Religious Texts; and RS 6130 Studies in Religious Movements and Institutions.

### Courses

6100 Interpretations of Religion (*Note: Credit may not be obtained for both Religious Studies 6100 and the former Religious Studies 6000*)

6120 Studies in Religious Texts

6130 Studies in Religious Movements and Institutions

6220 Selected Topics in New Testament

6230 Selected Topics in Hebrew Bible/Old Testament

6330 Selected Topics in Judaism

6340 Selected Topics in East Asian Religious Traditions

6720 Selected Topics in the History of Christianity

6730 Selected Topics in the Religious History of Canada

6740 Selected Topics in the Religious History of Newfoundland and Labrador

6750 Selected Topics in Medieval Religious Thought

6820 Selected Topics in Christian Ethics

6830 Selected Topics in Religion and Culture

6840 Selected Topics in the Philosophy of Religion

6850 Selected Topics in New Age Religious Movements

6900-10 Special Topics in the Study of Religion

## 5.19 Sociology

### Professor and Head of the Department

S.H. Riggins

The degrees of Master of Arts, Master of Philosophy and Doctor of Philosophy are offered in Sociology by full-time or part-time study. The department has developed foci at the doctoral level in the areas of Maritime Sociology, Gender, and Work and Development but other fields of specialization are available at the Master's level including Social Theory, Sociology of Knowledge, Social Inequality and Criminology. Graduate courses are taught as tutorials or small seminars.

### 5.19.1 Master of Arts

1. Minimum admission requirements are a B average in undergraduate studies with a good undergraduate background in Sociology.
2. The M.A. degree with thesis requires the completion of 12 credit hours in graduate courses, normally including the Graduate Seminar (6880) and Methods of Sociological Research (6040), and a thesis. In the case of full-time students, the M.A. with thesis is normally completed in two years. The first year is devoted to the completion of the required courses and the definition of the thesis research topic. The second year is devoted to the completion of the thesis.
3. The M.A. degree by course work requires the completion of 24 credit hours, normally including the Graduate Seminar (6880), Methods of Sociological Research (6040), Social Theory (6150), Master's Research Paper (6900) and three electives. These courses should be taken during the first two semesters of full-time study. The research paper (Sociology 6900) will be supervised by a faculty member and must be presented at a departmental seminar. The supervisor and one other member of department will grade the paper. The research paper should be written in the third semester of full-time study.

### Courses

A selection of the following graduate courses will be offered to meet the requirements of candidates, as far as the resources of the Department will allow:

6040 Methods of Sociological Research

6090-94 Special Area in Sociology

6120 Social Organization

6130 Social Stratification

6140 The Community

6150 Social Theory  
 6160 Theory Construction and Explanation in Sociology  
 6240 Sociology in Medicine  
 6280 Social and Economic Development  
 6300 Maritime Sociology  
 6310 Political Sociology  
 6320 Gender and Society  
 6330 Science and Technology  
 6340 Comparative North Atlantic Societies  
 6350 Environmental Sociology  
 6360 Sociology of Work  
 6370 Feminist Theory and Methods  
 6380 Women, Nature, Science and Technology (Cross listed as Women's Studies 6380)  
 6610 Socialization  
 6620 Current Topics in Social Behaviour  
 6880 Sociology Graduate Seminar  
 6900 Master's Research Paper (6 credit hours)

## 6 Regulations Governing the Degree of Master of Business Administration

### Associate Professor and Dean

G. Gorman

### Associate Professor and Associate Dean (Academic Programs)

T. Clift

The degree of Master of Business Administration is offered by full-time or part-time study.

These regulations must be read in conjunction with the **General Regulations** of the School of Graduate Studies of Memorial University of Newfoundland.

### 6.1 Qualifications for Admission

1. Admission is limited and competitive. To be considered for admission to the Master of Business Administration program, an applicant shall normally hold at least a Bachelor's degree, with a minimum 'B' standing, from an institution recognized by Senate. Applicants must achieve a satisfactory total score on the Graduate Management Admission Test (GMAT), as well as an appropriate balance of verbal and quantitative GMAT score components. Specific information regarding test centres, dates, registration procedure and deadlines can be obtained by writing to: Educational Testing Service/GMAT, P.O. Box 6103, Princeton, New Jersey, U.S.A., 08541-6103. Their web address is: [www.gmat.org](http://www.gmat.org). Relevant employment experience will be taken into account during the evaluation of applications.
2. In exceptional cases, applicants who have not completed an undergraduate degree, but who meet all other requirements, may be considered for admission. Preference will be given to those who present a high GMAT score, have a minimum of 10 years of full-time managerial and executive experience, and have completed several years of university studies. The Faculty may also take into account relevant professional credentials. Applicants, who do not meet normal admission requirements, may be required to complete, with a high level of achievement, certain undergraduate courses before being considered for admission.
3. When circumstances warrant, and only on the strong recommendation of the Faculty of Business Administration, consideration may be given to candidates who do not meet some of the above requirements.
4. Applicants who did not complete a four-year baccalaureate degree at a recognized university where English is the primary language of instruction must normally achieve a paper-based score of 580 (or higher)/computer-based score of 237 (or higher) on the Test of English as a Foreign Language (TOEFL). Those submitting results of the Test of Written English (TWE) as well, with a score of 4 or better, will receive preference in the evaluation of English proficiency. Information regarding both tests is available from the Educational Testing Service.

### 6.2 Deadlines for Applications

Applications and all supporting documents must be received not later than March 15 from Canadian applicants wishing to enter full-time or part-time studies in the Fall semester. Part-time applicants planning to enter in the Winter (January) or Spring (May) semester must apply prior to October 15 and January 15 respectively. Individuals submitting applications later than the above dates are not assured of consideration for admission to the program in the semester desired; their applications will be processed only if time and resources permit. Full-time and international applicants are normally considered for entry in the Fall semester. International applicants must submit complete documentation by February 1.

### 6.3 Procedure for Admission

1. Applications for admission to the MBA program must be made on the appropriate form to the School of Graduate Studies.
2. The following documents must be submitted in support of the official application form:
  - a. Letters of appraisal from three referees, at least one of whom has had close professional contact with the applicant within the last two years, and at least one of whom is capable of appraising the applicant's academic potential as a graduate student.
  - b. Two copies of the Faculty's Employment Experience Information Form.
  - c. Two official transcripts from each university or other post-secondary institution previously attended, to be sent directly by its Registrar (or equivalent officer) to the School of Graduate Studies. If not recorded on the transcript, official evidence of completion of undergraduate degree must also be submitted.
  - d. The official GMAT score report, to be sent directly by the Educational Testing Service. The code number for Memorial University of Newfoundland is 0885.
  - e. Where applicable, an official TOEFL score report, to be forwarded directly by the Educational Testing Service. As indicated above, overseas applicants have a stronger case if they also submit official results of the Test of Written English (TWE).

Note: *Application files are evaluated only when all required items have been received.*

3. Admission shall be by the Dean of the School of Graduate Studies on the recommendation of the Faculty of Business Administration. Upon notification from the Dean of the School of Graduate Studies of acceptance into the MBA program, applicants must give written notice to the School of Graduate Studies of their intention to register. Such notice must be received by the Office of the Dean within 30 days of notification of acceptance, or three weeks prior to semester registration.

## 6.4 Direct Entry and Advanced Standing

1. Students who have an undergraduate honours (or equivalent, e.g., first class from another university recognized by Senate) degree in business may apply for direct entry into the second year of the MBA Program. Their course load will be 8107 - Managing in the Canadian Environment, 8208 - Strategic Management, 8209 - Management Skills plus seven electives from the list of second year courses listed in Table III and **Programs of Study**, 3. Direct entry will normally be considered if the honours degree was awarded within seven years of the year for which admission is being sought. The Committee on Graduate Studies reserves the right to require additional first year courses where there are noted deficiencies in a student's undergraduate record.
2. The Faculty's Committee on Graduate Studies may recommend advanced standing for students who do not qualify for direct entry at the time of admission to the MBA program. After admission and normally not later than one week after registration, all other students may apply for advanced standing for 8000 level courses in the MBA program. Advanced standing for any 8000 level MBA course would normally require that the student had achieved a "B+" or better in a letter grade system or the equivalent to a grade of 75% or better at Memorial University of Newfoundland in undergraduate courses required for advanced standing. Courses will normally be considered for advanced standing if they are part of a degree that has been awarded within seven years of the year for which admission is being sought. Advanced standing will not be granted for 8107 - Managing in the Canadian Environment, 8208 - Strategic Management, 8209 - Management Skills, and 8203 - Management Science.
3. The following information must be submitted to the Associate Dean, Faculty of Business Administration, for evaluation by the Committee:
  - a. a detailed course outline for each course to be considered in the application for advanced standing;
  - b. a description of the method of evaluation used in each such course, the grades received, and the completion dates.
4. Students who enter the MBA program with previous graduate degrees may be granted transfer credit for two non-business, non-specified elective courses by the Faculty's Committee on Graduate Studies. The remaining electives will be chosen from courses offered by the Faculty of Business Administration. This will reduce their program from 20 courses to 18 courses. (This does not apply to students with degrees such as the LLB and Medical Doctor degrees that are not master's degrees.) Courses will only be considered for advanced standing if they are part of a degree that has been awarded within seven years of the year for which admission is being sought.

## 6.5 Programs of Study

1. The programs of study include:
  - a. a 60-credit hour program (equivalent to four semesters of full-time study) for candidates entering with an undergraduate degree in any area other than business. Thirty-three credit hours in program courses are compulsory and are specified in Table 1; the remaining 27 credit hours in program courses are electives.
  - b. a 48-credit hour course program plus a thesis for candidates entering with an undergraduate degree. Thirty-three credit hours in program courses are compulsory and are specified in Table I; the remaining 15 credit hours in program courses shall consist of 9103 (3 credit hours), 12 credit hours in courses agreed upon by each student and his or her supervisor plus a thesis, or
  - c. a 30-credit hour program (equivalent to two semesters of full-time study) for direct entry candidates. Three of the program courses (9 credit hours) are compulsory and are specified in Table II; the remaining 21 credit hours for candidates in the all-course program are electives. For direct entry candidates in the thesis option, courses shall normally consist of 8107, 8208, 8209 and 9103 (all 3-credit hour courses), 6 credit hours in courses agreed upon by each student and his or her supervisor plus a thesis. Additional courses may be recommended by the supervisor to the Committee on Graduate Studies where the preparation of the candidate in the cognate area is deemed to be inadequate.
2. Electives in the all course programs may be chosen from among the following:
  - a. approved business electives as listed in Table III;
  - b. up to 6 credit hours in courses from other graduate programs within the School of Graduate Studies, as approved by the Dean of Graduate Studies on the recommendation of the Faculty of Business Administration;
  - c. a Research Project or projects, which may be assigned up to 9 credit hours, as approved by the Dean of Graduate Studies on the recommendation of the Faculty of Business Administration;
  - d. any other course or project deemed to be of satisfactory content and rigor as approved by the Dean of Graduate Studies on the recommendation of the Faculty of Business Administration.
3. Candidates in the all course programs are required to choose among the elective courses so that they do:
  - a. at least one of B8204, B8210;
  - b. at least one of B9306, B9325, B9326, B9020; or another approved international course;
  - c. at least one of B9308, B9322, B9328.
4. The Faculty's Committee on Graduate Studies reserves the right to restrict candidates from taking particular MBA courses if it is deemed that those courses do not add sufficient value beyond courses that the candidate has completed at the undergraduate level. Regulations 3 a. and 3 b. above may be waived where the candidate is restricted from taking a particular course due to the completion of an undergraduate course. However, a candidate restricted from taking any one course listed under regulation 3 c. must complete a second course from that list.
5. Students are required to observe certain approved co- or prerequisites in scheduling their courses. These are as indicated:

**Master of Business Administration Prerequisite/Co-requisite Table**

Course	Prerequisites/Co-requisites*
Required Courses	
8103	Nil
8104	Nil
8106	Nil
8107	Nil
8108	8103*
8109	Nil
8205	Nil
8206	8103*, 8108*, 8109
8207	8103, 8108*
8208	8103, 8104, 8106, 8108, 8109, 8205*, 8206*, 8207*
8209	8104
Electives	
8203	Nil
8204	8104
8210	Nil
9020	Nine courses completed
9021	Nine courses including 8205
9022	Nine courses including 8205
9103	Nine courses completed including 8103
9301	Nine courses completed
9302	Nine courses completed plus 9301*
9303	Nine courses completed plus 9301* and 9302*
9306	Nine courses completed including 8103, 8104, 8106, 8108, 8109, 8205, 8206, 8207, 8208*
9308	Nine courses completed including 8103, 8106, 8108, 8109, 8206
9309	Nine courses completed including 8106
9311	Nine courses completed including 8104, 8204
9312	Nine courses completed including 8103, 8108, 8109, 8206
9314	Nine courses completed including 8103, 8108, 8109, 8206
9316	Nine courses completed including 8205
9317	Nine courses completed
9318	Nine courses completed including 8106
9320	Nine courses completed including 8103, 8108, 8109, 8206
9322	Nine courses completed including 8103, 8104, 8106, 8108, 8109, 8205, 8206, 8207, 8208*
9323	Nine courses completed including 8103, 8108, 8109, 8206, 9320
9324	Nine courses completed including 8104, 8204
9325	Nine courses completed including 8106
9326	Nine courses completed including 8103, 8108, 8109, 8206
9328	Nine courses completed including 8104
9329	Nine courses completed

Note: All 9000-level courses require the prior completion of nine courses, including any specific prerequisites or co-requisites.

- Students shall successfully complete the requirements of B8103-Statistical Applications in Management as part of the first 33 credit hours of their programs.
- Changes to a student's prescribed program, including the specified course load, must have the prior approval of the Dean of Graduate Studies on the recommendation of the Faculty of Business Administration.

## 6.6 Evaluation

- The Faculty Council of the Faculty of Business Administration constitutes the examining body for all examinations in Business courses. In addition, the standing of every student will be assessed by the Committee on Graduate Studies in accordance with the

requirements outlined in Clauses 2 through 5 below.

2. Credit towards the MBA degree will be granted only for those courses which have been approved as constituting part of the student's program of study and in which the candidate has obtained a mark of 65% or higher.
3. A candidate is required to withdraw from the MBA program if:
  - a. a final grade of 'D' or 'F' is obtained in two courses, or
  - b. a final grade of 'C' or less is obtained in three courses, or
  - c. a final grade of 'C' or less is obtained in a repeated course.
4. Clause 3. notwithstanding, to remain in the program, a candidate who obtains a final grade of 'C' or less in any course must normally repeat that course when next offered, and is permitted to repeat that course only once.
5. Clause 3. notwithstanding, in some instances, at the discretion of the course instructor, and with the approval of the associate dean, academic programs, Faculty of Business Administration, a student who has received a grade of 'C' or less in any course may be permitted to complete remedial work and may be re-examined. A student who passes after re-examination will have "passed on the basis of re-examination" recorded on their transcript, and the original grade will remain. A student who receives a grade of 'C' or less after re-examination will be required to withdraw from the program. The original grade will count as part of the total number of final grades of 'C' or less permitted before a student is required to withdraw as specified in 3. above.

Note: *The pursuit of remedial work may not be offered more than twice to an individual student.*

### Courses

The schedule of courses of the curriculum and elective courses are as follows:

**Table I - Master of Business Administration Schedule of Courses**

<b>Term 1</b> 8103 Statistical Applications in Management 8104 Organizations: Behavior and Structure 8106 Marketing 8107 Managing in the Canadian Environment 8108 Economics for Business 8109 Accounting for Management  <b>Term 3</b> Five Electives (may include project)	<b>Term 2</b> 8205 Information Systems 8206 Managerial Finance 8207 Operations Management 8208 Strategic Management 8209 Management Skills  <b>Term 4</b> Four electives (may include project)
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**Table II - Master of Business Administration Schedule of Courses (students with direct entry to Term 3)**

<b>Term 3</b> 8107 Managing in the Canadian Environments Four Electives (may include project)	<b>Term 4</b> 8208 Strategic Management 8209 Management Skills Three electives (may include project)
---	---

**Table III - Master of Business Administration Electives - Schedule of MBA Electives**

8001-005 Special Topics 8203 Management Science 8204 Human Resource Management 8210 Labour Relations 9001-9019 Special Topics 9020 International Human Resource Management 9021-9050 Special Topics 9102 Management Decision Analysis 9103 Research in Management 9202 Management Problem Solving 9301-03 Research Project (Variable Credit) 9306 International Strategic Management 9307 Management of Not-for-Profit Organizations 9308 New Venture Creation 9309 Marketing Management 9310 Management Science Applications 9311 Seminar in Human Resource Management	9312 Financial Management 9313 Natural Resource Management 9314 Business and Taxation Law 9315 Advanced Accounting 9316 Information Systems Management 9317 Current Topics in Management 9318 Marketing Communications Management 9320 Investments and Portfolio Management 9322 Strategic Management of Technology and Innovation 9323 Financial Forward, Futures, and Options Markets 9324 Women and Men in Organizations 9325 Accessing International Markets 9326 International Finance 9327 Human Issues in International Business 9328 Change Management 9329 Labour Law
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Two graduate electives from programs in other Faculties and Schools in the School of Graduate Studies.

**Table IV - Master of Business Administration Course Restrictions**

Credit may be obtained for only one course from each of the pairs of courses listed in Table IV.

Present Course	Replaces Course	Present Course	Replaces Course
8107	9201	9321	8210
8108	8101 or 8201	9324	9004
8109	8102 or 8202	9325	9005
8207	9319	9326	9010
8208	9101	9327	9007

## 7 Regulations Governing the Degree of Master of Business Administration (Executive Option)

The degree of Master of Business Administration (Executive Option), or EMBA, is cohort-driven. These regulations must be read in conjunction with the **General Regulations** of the School of Graduate Studies of Memorial University of Newfoundland.

### 7.1 Qualifications for Admission

1. Admission is limited and competitive. To be considered for admission to the EMBA program, an applicant shall normally hold at least a bachelor's degree, with a minimum 'B' standing, from an institution recognized by Memorial University of Newfoundland's Senate.
2. Applicants must achieve a satisfactory total score on the Graduate Management Admission Test (GMAT), as well as an appropriate balance of verbal and quantitative GMAT score components. Specific information regarding the test can be obtained by writing to: Educational Testing Service/GMAT, P.O. Box 6103, Princeton, New Jersey, U.S.A., 08541-6103 or by contacting the Web site at [www.gmat.org](http://www.gmat.org).
3. Applicants with substantial management experience will receive preference during evaluation of applications. Normally, applicants will have a minimum of eight years of relevant management experience.
4. Applicants who did not complete a four-year bachelor's degree at a recognized university where English is the primary language of instruction must submit an acceptable score on the Test of English as a Foreign Language (TOEFL), or achieve a satisfactory score on the CanTEST. Information regarding the TOEFL is available from the Educational Testing Service (see address in 6.1.1). Information on CanTEST is available from CanTEST Project Office, Second Language Institute, University of Ottawa, Canada K1N 6N5.
5. All applicants will be interviewed prior to acceptance to the EMBA program by at least two members of the Faculty's Committee on Graduate Studies to assess the applicant's personal qualities, such as leadership potential and motivation, which are important to successful managers.
6. While all of the criteria above are important, the Faculty's Committee on Graduate Studies will assess the applicant's entire profile. Significant strengths in one area may help compensate for weaknesses in another area.
7. In selecting candidates for any particular cohort, the Faculty's Committee on Graduate Studies will attempt to ensure that there is a breadth of managerial experience and practical backgrounds within the cohort as this is important to the students' learning environment. Student experience is expected to contribute to and enhance the learning experience for the entire cohort.

### 7.2 Deadlines for Application Submissions

1. Applications and all supporting documents must be received by June 15 from Canadian applicants. Application from foreign cohorts should be complete at least four months before the proposed commencement date. Individuals submitting applications later than the above dates are not assured of consideration for admission to the cohort desired; their applications will be processed only if time and resources permit.
2. The Faculty of Business Administration reserves the right not to offer an EMBA program during any period where there is deemed to be insufficient demand. Further, the faculty reserves the right to restrict the size of any cohort of students admitted to the EMBA program.

### 7.3 Procedure for Admission

1. Applications for admission to the EMBA program must be made on the appropriate form to the School of Graduate Studies.
2. The following documents must be submitted in support of the official application form:
  - a. Letter of appraisal from two work-related referees.
  - b. Two copies of the faculty's Employment Experience Information form.
  - c. Two official transcripts from each university or other post-secondary institution previously attended, to be sent directly by its registrar (or equivalent officer) to the School of Graduate Studies. If not recorded on the transcript, official evidence of completion of undergraduate degree must also be submitted.
  - d. The official GMAT score report, to be sent directly by the Educational Testing Service. The code number for Memorial University of Newfoundland is 0885.
  - e. Where applicable, an official TOEFL or CanTEST score report, to be forwarded directly by the examining organization.

Note: *Application files are evaluated only when all required items have been received.*
3. Admission shall be by the Dean of the School of Graduate Studies on the recommendation of the Faculty of Business Administration. Upon notification of acceptance into the EMBA program, applicants must give written notice to the School of Graduate Studies of their intention to register. Such notice must be received by the Office of the Dean within 30 days of notification of acceptance, or three weeks prior to semester registration.

### 7.4 Programs of Study

1. The EMBA program is cohort-driven and structured so that students within any cohort complete a program of 20 courses. Normally, the program will be delivered over four academic terms, and the contact time per course will be 26 hours, recognizing the experience of the candidates, and the extended time between classes which will allow the assignment of more course-related work to be completed outside of the classroom environment. In some instances, the program may be offered over a shorter duration. When this happens, the contact time per course will increase as the expectation for students to complete course-related work between classes will be lower. The twenty course program structure is outlined in **Table 1 - Master of Business Administration (Executive Option) Program of Study**.

Table I - Master of Business Administration (Executive Option) Program of Study

<b>Term 1</b> 8103 Statistical Applications in Management 8104 Organizations: Behavior and Structure 8106 Marketing 8107 Managing in the Canadian Environment 8109 Accounting for Management	<b>Term 2</b> 8108 Economics for Management 8204 Human Resource Management 8206 Managerial Finance 8210 Labor Relations
9103 - Research in Management	
<b>Term 3</b> 8205 Information Systems 8207 Operations Management 8209 Management Skills Two additional courses chosen by the Faculty of Business Administration	<b>Term 4</b> 8208 Strategic Management Three additional courses chosen by the Faculty of Business Administration
9301 - Research Project	

- Five courses will be chosen by the Faculty of Business Administration to meet the needs of each cohort.
- Students in the EMBA program may apply to complete up to two courses in the regular MBA program. Approval will be given if:
  - the student can demonstrate a need for a course which is not offered to their cohort, but which is available in the regular MBA program;
  - the student can demonstrate that there is a course being offered to their cohort that does not meet their specific needs;
  - the student is able to attend classes at the time and place that the course is offered in the regular MBA program;
  - sufficient resources are available to allow the student to take the course in the regular MBA program.
- Any program changes, including those described in 1. through 3. above, must have the prior approval of the Dean of Graduate Studies on the recommendation of the Faculty of Business Administration.

## 7.5 Evaluation

- The Faculty Council of the Faculty of Business Administration constitutes the examining body for all examinations in Business courses. In addition, the standing of every student will be assessed by the Committee on Graduate Studies in accordance with the requirements outlined in Clauses 2. through 5. below.
- Credit towards the MBA degree will be granted only for those courses which have been approved as constituting part of the student's program of study and in which the candidate has obtained a mark of 65% or higher.
- A candidate is required to withdraw from the MBA program if:
  - a final grade of 'D' or 'F' is obtained in two courses, or
  - a final grade of 'C' or less is obtained in three courses, or
  - a final grade of 'C' or less is obtained in a repeated course.
- Clause 3. notwithstanding, to remain in the program, a candidate who obtains a final grade of 'C' or less in any course must normally repeat that course when next offered, and is permitted to repeat that course only once.
- Clause 3. notwithstanding, in some instances, at the discretion of the course instructor, and with the approval of the associate dean, academic programs, Faculty of Business Administration, a student who has received a grade of 'C' or less in any course may be permitted to complete remedial work and may be re-examined. A student who passes after re-examination will have "passed on the basis of re-examination" recorded on their transcript, and the original grade will remain. A student who receives a grade of 'C' or less after re-examination will be required to withdraw from the program. The original grade will count as part of the total number of final grades of 'C' or less permitted before a student is required to withdraw as specified in 3 above.

Note: *The pursuit of remedial work may not be offered more than twice to an individual student.*

## 8 Regulations Governing the Degree of Master of Education

### Professor and Dean

A. Collins

### Associate Professor and Associate Dean

R. Hammett

- Notes: 1. *In the case of the following general program regulations and the specific program regulations, which govern all Master of Education degree programs, Dean refers to the Dean of Graduate Studies, Dean of Education refers to the Office of the Dean, Faculty of Education, and Faculty refers to the Faculty of Education, through its various operating committees.*
2. *Students taking any of the Master of Education Degree programs are advised that a Bachelor of Education Degree is required for employment in the K - 12 system.*

The Master of Education is offered in the following areas: Educational Leadership Studies, Curriculum, Teaching and Learning Studies, Counselling Psychology, Post-Secondary Studies, and Information Technology.

### 8.1 Qualifications for Admission

- Admission to the Master of Education is limited and competitive. To be considered for admission to a graduate program in Education, an applicant shall:
  - have from a recognized institution, either (i) an undergraduate degree with at least second class standing, or (ii) an undergraduate degree and an average of at least 70% in the last 90 attempted undergraduate credit hours.
  - meet the requirements set forth in the specific program regulations.
- Only in exceptional circumstances, and only on the recommendation of the Dean of Education, shall the Dean consider applicants who do not meet the requirements in 1.
- Please refer to **Specific Programs** regulations for additional admission requirements.



## 8.2 Program of Study

1. Candidates for the Master of Education (Educational Leadership Studies, Curriculum, Teaching and Learning Studies) shall be required to complete a minimum of:
  - a. 18 credit hours plus a thesis; or
  - b. 24 credit hours plus an internship report, a project report or a paper folio; or
  - c. 30 credit hours on the comprehensive-course route.

Candidates for the Master of Education (Post-Secondary Studies) shall be required to complete a minimum of:

- a. 18 credit hours plus a thesis; or
- b. 24 credit hours plus an internship; or
- c. 30 credit hours on the comprehensive-course route

Candidates for the Master of Education (Counselling Psychology) shall be required to complete a minimum of:

- a. 30 credit hours (which include an internship) plus a thesis; or
- b. 36 credit hours (which include an internship) on the comprehensive-course route.

Unless otherwise indicated, all courses have a 3-credit hour value.

Programs for some candidates may exceed the above minimum.

2. Candidates may apply for transfer of course credits. All course transfers require the approval of the Dean, on the recommendation of the Dean of Education, and are subject to General Regulation, **Program Requirements, Transfer of Course Credits** of the School of Graduate Studies.
3.
  - a. A candidate with full-time status may register for a maximum of 12 credit hours in any regular semester and a maximum of 6 credit hours in intersession or summer session.
  - b. A candidate with part-time status may register for a maximum of 3 credit hours in any semester or session, excluding summer session, when 6 credit hours are permitted.
  - c. Candidates may register for additional courses in a semester or session with the permission of the Office of the Associate Dean of Graduate Programs in Education.
4. Before submission of the proposal for thesis, project, internship, or paper folio, a Supervisory Committee shall be recommended by the Dean of Education, in consultation with the candidate, and approved by the Dean. The Supervisory Committee shall consist of the Supervisor and at least one other member.

The function of the Supervisory Committee shall be to approve the proposal for the thesis, project, internship, or paper folio, and to exercise supervision in the conduct of the study on behalf of the Faculty, subject to the final approval of the Dean.

## 8.3 Period of Study

The period of the study for a graduate program shall not normally exceed six years beyond first registration. Completion of some program components may require full-time study on the University campus.

## 8.4 Evaluation

1. In order to continue as a candidate for the Master of Education degree, a candidate who receives a final grade of "C" in any program course must repeat that course and obtain a minimum grade of "B". In the case of an elective course a suitable replacement course, acceptable to the Faculty, may be substituted for the failed course. Only one such repetition/replacement shall be permitted on the candidate's graduate program. Should a grade of less than "B" be obtained in the repeated course, replacement course, or any other program course, the candidate shall be required to withdraw from the program.
2. When the Faculty has determined, through consultation with the candidate, the instructors of graduate courses, and the program advisor or thesis supervisor that the candidate's work has fallen below satisfactory level, it may request that the Dean of Education recommend to the Dean that the candidate's program be terminated.

## 8.5 Thesis

See School of Graduate Studies General Regulation, **Theses and Reports**.

## 8.6 Program Regulations

Every candidate in graduate studies shall comply with the School of Graduate Studies **General Regulations**, the Degree Regulations **Program of Study**, and the specific program regulations as outlined in **Specific Programs**.

## 8.7 Appeals and Waivers Procedures

Candidates are advised that appeals and waivers of any regulations governing the degree of Master of Education are governed by School of Graduate Studies General Regulations **Provision For Waiver of Regulations** and **Appeal Procedures**.

## 8.8 Specific Programs

### 1. Educational Leadership Studies

Educational Leadership Studies is designed to prepare candidates for leadership in Education.

#### a. Admission Requirements

In addition to meeting the requirements in the general degree regulations,

- i. students must have completed a range and number of courses in Education deemed appropriate by the Faculty and Dean of Education.
- ii. a minimum of two years of teaching/leadership experience is recommended.

#### b. Program Requirements

- i. all students in the Master of Education Program (Educational Leadership Studies) must complete:
  - 6100 Research Designs and Methods in Education

- 6204 Educational Administration: Theory and Practice
  - 6205 Educational Policy: Theory and Practice and one of the following:
  - 6 credit hours (thesis route) within closed electives as listed in v. below
  - 9 credit hours (internship, paper folio, project, comprehensive course route) within closed electives as listed in v. below
- ii. students on the thesis route must complete at least one of the research courses listed below (6100 is prerequisite):
    - 6466 Qualitative Research Methods
    - 6467 Quantitative Research Methods
    - 6468 Critical Approaches to Educational Research
    - 6469 Theoretical and Methodological Foundations of Action Research
  - iii. students on the comprehensive-course route must complete 6290 Research and Development Seminar in Educational Leadership Studies. Normally students would be permitted to register for this course only after all other course requirements have been met, or during the student's last semester of studies.
  - iv. to meet total credit hour requirements students may choose electives from any university graduate offering provided that those chosen are appropriate to the student's program:
    - students on the thesis route must complete a total of at least 18 credit hours
    - students on the internship, paper folio, or project route must complete a total of at least 24 credit hours and the appropriate course option 6291 Internship in Educational Leadership Studies (6 credit hours), 6292 Project in Educational Leadership Studies (6 credit hours), or 6293 Paper Folio in Educational Leadership Studies (6 credit hours)
    - students on the comprehensive-course route must complete a total of at least 30 credit hours
  - v. Closed electives are those listed below:
    - 6202 Social Context of Educational Leadership
    - 6203 Leadership: Theory and Practice
    - 6321 Supervisory Processes in Education
    - 6330 Educational Finance
    - 6335 Legal Foundations of Educational Administration
    - 6410 Seminar on Philosophical Issues in Educational Policy and Leadership
    - 6420 Ethical Issues and Perspectives in Educational Practice and Policy
    - 6425 Comparative Perspectives in Public Education, Reform and Leadership
    - 6426 Computer Applications in Educational Administration
    - 6440 Family-School Relations: Leadership and Policy Implications
    - 6465 School Violence: Leadership and Policy Implications
    - 6664 Seminar in School Improvement

Courses must be appropriate to the program and chosen in consultation with the advisor.

## 2. Curriculum, Teaching and Learning Studies

The Master of Education in Curriculum, Teaching and Learning Studies provides opportunities for students to investigate pertinent issues in these interrelated areas from a variety of perspectives: philosophical, historical, social, cultural, cognitive, and technological. The conceptual bases of curriculum, teaching, and learning are explored and analysed along with related examples of historical and current policies and practices. The program encourages the development of broad-based insights into issues related to these areas through an emphasis on critical inquiry and reflective practice. It supports students in the development and enhancement of research capabilities and professional expertise and practice.

Students may choose between two program options in Curriculum, Teaching and Learning Studies:

### Option One

Students may choose to specialize in one of a number of areas of study: Computers in Education, Language and Literacy Studies, Mathematics Education, Music Education, Science Education, Second Language Education, Social Studies Education, Special Education, and Teacher-Librarianship.

### Option Two

In consultation with a faculty advisor, students may choose to design a program speciality which addresses their research interests. Specialty foci within Curriculum, Teaching, and Learning Studies are numerous and may include technology and web-based education, arts education, rural and multi-age education, cultural studies and critical theory, and social justice education. Students may alternatively select appropriate courses from other Master of Education program offerings to develop a program to meet their learning goals. Students interested in this option are strongly encouraged to explore and to focus their research and study interests and to discuss these interests with a faculty advisor.

#### a. Admission Requirements

In addition to meeting the requirements in the general degree regulations,

- i. students must have completed a range and number of courses in Education deemed appropriate by the Faculty and Dean of Education.
- ii. a minimum of two years of teaching or related experience is recommended.
- iii. for a specialization in special education, a completed Bachelor of Special Education degree or equivalent is required and enrolment will be limited to applicants articulating a research focus for which appropriate thesis supervision is available.

#### b. Program Requirements

- i. all students in the Master of Education Program (Curriculum, Teaching and Learning Studies) shall be required to complete:
  - 6100 Research Designs and Methods in Education
  - 6300 Teaching and Learning
  - 6602 Curriculum Studies
- ii. students on the thesis route must complete at least one of the research courses listed below (6100 is prerequisite):
  - 6466 Qualitative Research Methods
  - 6467 Quantitative Research Methods
  - 6468 Critical Approaches to Educational Research
  - 6469 Theoretical and Methodological Foundations of Action Research

- and at least 2 courses from any university graduate offering provided that those chosen are appropriate to the student's program
- iii. students choosing Option One on the internship, paper folio, project route, and comprehensive-course route must complete at least 2 courses within one particular speciality area from the list in viii. below.
- iv. students choosing Option Two must choose courses that have been designated through consultation with faculty advisor during the first semester of studies in this program.
- v. students choosing the Special Education specialization within Curriculum, Teaching and Learning Studies must complete a thesis and at least two of the required Special Education speciality courses.
- vi. students on the comprehensive-course route must complete E6390 Research and Development Seminar in Curriculum, Teaching and Learning Studies. Normally students would be permitted to register for this course only after all other course requirements have been met, or during the student's last semester of studies.
- vii. to meet total credit hour requirements students may choose electives from any university graduate offering provided that those chosen are appropriate to the student's program:
  - students on the thesis route must complete a total of at least 18 credit hours
  - students on the internship, paper folio, or project route must complete a total of at least 24 credit hours and the appropriate course option 6391 Internship in Curriculum, Teaching and Learning Studies (6 credit hours), 6392 Project in Curriculum, Teaching and Learning Studies (6 credit hours), or 6393 Paper Folio in Curriculum, Teaching and Learning Studies (6 credit hours)
  - students on the comprehensive-course route must complete a total of at least 30 credit hours
- viii. core speciality courses in the study of curriculum, teaching and learning areas are those listed below:

#### **Computers in Education**

6610 Research on Computers in the Curriculum  
6620 Issues and Trends in Educational Computing

#### **Language and Literacy Studies**

6106 Reading and Teaching Popular Culture  
6108 Literacy and Language Education  
6641 Writing in the Primary, Elementary and Secondary Schools  
6642 Developmental Reading (K-8)  
6643 Contemporary Issues in Secondary English  
6645 Literature for Children and Adolescents  
6647 Diagnosis and Remediation of Reading and Writing Difficulties  
6649 Exploring Multiple Literacies  
6693 Literacy for the Young Child in Home and School

#### **Mathematics Education**

6630 Critical Issues in Mathematics Education  
6634 Teaching and Learning to Solve Mathematics Problems  
6639 Technology and the Teaching and Learning of Mathematics

#### **Music Education**

6502 Contexts of Music Education  
6503 Teaching Music from the Podium  
6504 Musicianship, Pedagogy, and Learning

#### **Science Education**

6653 Contemporary Issues in Science Education I  
6655 The Nature of Science and Science Education  
6658 Teaching and Learning Scientific Concepts, Laws, and Theories

#### **Second Language Education**

6665 Second Language Curriculum  
6667 Second Language Instruction  
6668 Current Issues in Second Language Education

#### **Social Studies Education**

6670 Teaching and Learning Social Studies  
6671 Research in Social Studies Education  
6672 Issues and Trends in Social Studies

#### **Special Education**

6712 The Nature and Assessment of Behaviour Disorders in Children and Adolescents  
6714 Principles and Practices in Exceptionality  
6755 Nature and Assessment of Learning Disabilities

#### **Teacher-Librarianship**

6662 Seminar in Teacher-Librarianship  
6664 Seminar on School Improvement

Additional courses in the speciality areas are available.

### **3. Counselling Psychology**

The mission of the program in Counselling Psychology is to prepare highly knowledgeable, skilled, dedicated, and ethical professional practitioners, who will endeavour to enhance human potential throughout the life span and who can effectively practice within a variety of settings.

The Counselling Psychology faculty promotes counselling as an effective, viable means of assisting individuals throughout the life span. The counselling psychologist, regardless of his or her theoretical stance or work setting, functions as a change agent who is sensitive to and knowledgeable about the range of human development reflected in individual differences and cultural and linguistic diversity. Effective and positive change is brought about by assisting clients to: examine and modify their behaviour for more effective living; cope with, adjust to, or otherwise negotiate the environments affecting their psychosocial well-being; and effect change in the larger society.

The practice of Counselling Psychology is based on theory and research, an understanding of ethical practices, and a set of professional and interpersonal skills. It is essential that graduate students study a variety of conceptual frameworks and research

findings as preparation for collaborative work with other helping professionals, paraprofessionals, and a variety of self-help groups.

The Counselling Psychology faculty, while representing a range of views, agree that the uniqueness of the individual and his or her personal strengths must be acknowledged and respected. To fully explore professional issues and personal values, a trusting and open atmosphere must be present.

Individuals from a wide variety of personal, social, and educational backgrounds are encouraged to apply to the Counselling Psychology program. The program provides a broad-based sequence of studies and supervised experiences that will prepare graduate students to be knowledgeable and skilled practitioners who can function in a variety of settings. By the time they have completed this program, students will have acquired knowledge and competencies in the following general areas: individual and group counselling theory and techniques, legal and ethical aspects of counselling, human development and learning, social, cultural, and linguistic diversity, career education and counselling, program development and implementation, measurement and appraisal, research and program evaluation, and application of current technology service delivery in rural areas.

#### a. Admission Requirements

In addition to meeting the requirements in the general degree regulations, students:

- i. must have completed Education 3210, Introduction to Counselling.
- ii. should have completed at least one undergraduate course on each of the following topics: statistics (Education 2900), assessment (Education 3280, 3290, 3950, 3955 or 4950), introduction to career education (Education 3211), introduction to exceptionality (Education 3220 or 3230). (Or their equivalent)  
 Note: *Many of these courses are prerequisites to specific graduate courses and must be completed before taking those courses.*
- iii. should normally have at least one year of teaching (or related work) experience.
- iv. must submit a resume that contains a concise rationale for the application (500 words or less) and three letters of recommendation (preferably one from each of the following: previous university instructors, supervisors, or employers).
- v. should note admission is selective and controlled by an admission committee of faculty members involved in the program. An interview may be required if deemed necessary.
- vi. should note the Graduate Record Examination may be required.

#### b. Program Requirements

- i. all students in the Master of Education (Counselling Psychology) program shall be required to complete:
  - 6100 Research Designs and Methods in Education (Prerequisite: Education 2900)
  - 6702 Counselling: Theory and Practice (Prerequisite: Education 3210)
  - 6706 Career Education and Career Counselling (Prerequisite: Education 3211)
  - 6708 Group Counselling: Theory and Practice (Prerequisite: Education 6702)
  - 6700 Ethical and Legal Issues in Counselling
  - 6720 Internship in Counselling Psychology (Prerequisite: Normally completion of all courses) (9 credit hours)
- ii. Students on the thesis route must complete the core courses listed above (24 credit hours) as well as a minimum of 6 credit hours from the closed electives indicated below for a total of 30 credit hours.
- iii. Students on the comprehensive-course route must complete the core courses listed above (24 credit hours) as well as a minimum of 6 credit hours from the closed electives and 6 credit hours from any university graduate offering provided that those chosen are appropriate to the student's program for a total of 36 credit hours.
- iv. All students in the Counselling Psychology program must complete 6720. The Internship may be fulfilled full-time or part-time and must comprise 600 clock hours with 240 hours of direct service with clients. It cannot be completed as part of your regular employment. *It is strongly recommended that students take no other course during the full-time internship.*
- v. Closed electives are those listed below:
  - 6703 Personal and Professional Development Group
  - 6705 Nature and Development of School Counselling Services
  - 6712 The Nature and Assessment of Behaviour Disorders in Children and Adolescents
  - 6714 Principles and Practices in Exceptionality
  - 6716 Working with Families and Parents
  - 6717 Counselling Adolescents
  - 6718 Elementary School Counselling
  - 6719 Cultural Issues in Counselling
  - 6709 Assessment of Intelligence and Learning Skills (Prerequisite: 3600 or its graduate equivalent to be developed. Normally, students in Counselling Psychology will not enroll in this course until the latter part of their program).  
 Candidates intending to pursue a career in the K-12 school system in Newfoundland and Labrador are urged to take this course and the prerequisite.
  - 6802 Adult Learning and Development
  - 6713 Educational Applications of Contemporary Cognitive Psychology

Notes: 1. *Student membership in the Canadian Counselling Association (CCA) or other appropriate professional organizations is strongly recommended for all students in the program.*

2. *Students who plan to work in the school system should be aware of the Department of Education regulations to be eligible to work as a school counsellor.*

3. *Students who plan to become registered psychologists in Newfoundland and Labrador should review the requirements of the Newfoundland Board of Examiners in Psychology.*

#### 4. Post-Secondary Studies

The graduate programs in Post-Secondary Studies are designed to prepare candidates to function in a variety of roles in informal and formal post-secondary learning environments (including academic, technical, professional, adult education, health professional education, and student services/development). These programs facilitate a study of the post-secondary educational systems through an examination of their foundations, directions, organization and administration; and through curriculum and instructional development options for occupational preparation and adult education.

##### a. Admission Requirements

In addition to meeting the requirements in the general degree regulations,

- i. candidates must have completed an undergraduate course in statistics (Education 2900), adult learning (Education 2801), and post-secondary education (Education 2720), or have accumulated the equivalent experiences in each of the above three areas as approved by the Head of the Academic Unit;
- ii. two years of successful experience in working with adult learners is recommended;

- iii. and for the Graduate Diploma in Post-Secondary Studies (Health Professional Education) program, candidates must have appropriate academic qualifications and work experience in a health-related field.

**b. Program Requirements (M. ED.)**

- i. Candidates for the Master of Education (Post-Secondary Studies) are required to complete courses that form the program core.
- 6100 Research Designs and Methods in Education
  - 6801 Foundations of Post-Secondary Programs
  - 6802 Adult Learning and Development
  - 6803 Research in Post-Secondary Education
  - and not fewer than 6 credit hours from closed electives in vii. below.
- ii. Students holding the Graduate Diploma in Post-Secondary Studies (Health Professional Education) and accepted in the Master of Education (Post-Secondary Studies) will complete up to 12 fewer credit hours dependent upon the chosen program route and the completion date of the Graduate Diploma.
- iii. Students on the comprehensive-course route must complete 6890 Research and Development Seminar in Post-Secondary Studies.
- iv. Students on the internship route must complete 6891 Internship in Post-Secondary Studies (6 credit hours).
- v. Normally, students will be permitted to register for 6890 and 6891 only after all other course requirements have been met.
- vi. To meet total credit hour requirements students may choose courses from other graduate offerings within the Faculty, the University, or other universities provided the courses chosen are appropriate to the student's program. Students on the thesis route must complete a total of at least 18 credit hours; and those on the internship or comprehensive-course route a total of at least 30 credit hours.
- vii. Closed electives are those listed below:
- 6804 Leadership and Human Resource Development in Post-Secondary Education
  - 6805 Advanced Human Resource Communications
  - 6806 Interprofessional Education in the Health Professions
  - 6822 Foundations of Instructional Design in Post-Secondary Education
  - 6823 Principles of Program Design and Development
  - 6832 Issues and Trends in the Administration of Post- Secondary Education
  - 6940 Administration of Student Services in Post-Secondary Education
  - 6841 Student Development Theory, Services and Programs in Post-Secondary Education
- c. Program Requirements for Graduate Diploma in Post-Secondary Studies (Health Professional Education)**

The Graduate Diploma in post-secondary studies, specialization in health professional education, which was created in collaboration with the Centre for Collaborative Health Professional Education, is designed to enhance health professionals' abilities as educators and leaders in educational program design, development, evaluation and administration. The Graduate Diploma is intended for educators and educational leaders of formal and informal post-secondary health professional education programs.

Participants will engage in an in-depth study of the structure and organization of the post-secondary education system, theories and philosophies of adult learning and development; and through elective courses pursue studies of program development models, instructional design frameworks, evaluation and assessment techniques, teaching methods, and research design principles in post-secondary teaching and learning. Opportunities will exist for the guided study of these topics as they relate to health professional education.

- i. Candidates for the Graduate Diploma in Post-Secondary Studies (Health Professional Education) are required to complete courses that form the program core.
- 6801 Foundations of Post-Secondary Programs
  - 6802 Adult Learning and Development
  - 6806 Interprofessional Education in the Health Professions
  - and not fewer than 3 credit hours from closed electives in b. vii. above or from:
- 6100 Research Designs and Methods in Education
  - 6803 Research in Post-Secondary Education
- ii. Students are encouraged to relate their assignments in these courses to health professional education.
- iii. Students enrolled in the Graduate Diploma program may request transfer to the Master of Education (Post-Secondary Studies). Courses for both the Graduate Diploma and the degree must be appropriate to the program and chosen in consultation with the student's advisor.

**5. Information Technology**

The graduate program in Information Technology is offered in partnership with the Cape Breton University (CBU). It is designed to facilitate the educational use of information technology in a wide variety of settings. The program will be of interest to educators at all levels including K-12 teachers, school administrators, those in the post-secondary system, business and industry, as well as those in most other adult learning situations.

Information technology in this Master of Education program encompasses computer, communications, networking and multi-media applications. The overall intent of the program is to:

- provide educators with skill sets and pedagogical expertise that will enable them to address computer and related information technology in a teaching/learning situation;
- develop potential information technology leaders for the educational system;
- develop instructional designers, for a variety of educational settings, who are able to combine information technology with learning theory to enhance curriculum development and delivery;
- provide a basis for the continued professional development of educators in the area of information technology;
- develop an awareness of the applications of information technology in a wide variety of educational contexts; and
- develop research expertise and potential in the use and application of information technology for teaching and learning purposes.

Candidates for the program will have attained, prior to acceptance, some fundamental knowledge and skills with respect to

information technology through pre-requisite experiences, and have attained a recognized undergraduate degree in an appropriate discipline with at least a second class standing (see specific regulations for details). The program components are designed to enable candidates to build on their prior experience through the development of pedagogical links and information technology applications. It is intended that the program be offered primarily as a part-time program through distance delivered courses, with other delivery formats to be considered/utilised where feasible. Access to specific computer hardware, software, and the internet is required and will be the responsibility of each candidate.

A steering committee comprised of three members from each of the Faculty of Education at Memorial University of Newfoundland and the Institute for Education at CBU is responsible to the Associate Dean of Graduate Programs and Research, Faculty of Education, for selected aspects of the program. The latter include assessing student applications, recommending approval of instructors who are not regular faculty members at either CBU or Memorial University of Newfoundland, and recommending course or program changes. This committee is to be co-chaired by the Associate Dean of Graduate Programs and Research, Faculty of Education, Memorial University of Newfoundland and the Director of the Institute for Education at CBU, or their designate(s).

CBU courses offered as part of this program are indicated by the prefix "CBU EDU" followed by the specific course number.

#### a. Admission Requirements

In addition to meeting the requirements in the general degree regulations, Faculty of Education, Memorial University of Newfoundland, candidates must have successfully completed:

- i. one of a diploma or certificate in information technology from an accredited institution; CBU EDU 530; Memorial University of Newfoundland E2751 and E3751; or equivalent as determined by the program steering committee.

#### b. Program Requirements

- i. all candidates for the Master of Education (Information Technology) must complete E6100 Research Designs and Methods in Education.
- ii. candidates on the thesis route must complete:
  - three credit hours from:
    - 6610 Research on Computers in the Curriculum
    - 6615 Educational Software Prototyping and Evaluation
    - 6620 Issues and Trends in Educational Computing
  - nine credit hours selected from the core elective CBU courses approved for this program:
    - CBU EDU 531 Assessment of Software and Information Technology Applications for Education
    - CBU EDU 533 Integration of Instructional Design and Information Technology
    - CBU EDU 535 Applications of Learning Theory in Educational Multi-media Design
    - CBU EDU 537 Designing Web-based Learning
    - CBU EDU 539 Technology Planning for Educational Environments
    - CBU EDU 541 Information Management for Educational Environments
  - three credit hours from: 6822, 6823, 6802, E6426, or from other Memorial University of Newfoundland, Faculty of Education graduate course offerings as deemed appropriate for each candidate's program and approved by the program steering committee.
- iii. candidates on the comprehensive-course route must complete:
  - six credit hours selected from E6610, E6615, E6620 listed in ii. above
  - twelve credit hours selected from CBU EDU 531, EDU 533, EDU 535, EDU 537, EDU 539, EDU 541 listed in ii. above
  - E6590 Research and Development Seminar in Information Technology in Education
  - three credit hours from E6822, E6823, E6802, E6426, or from other Memorial University of Newfoundland, Faculty of Education graduate course offerings as deemed appropriate for each candidate's program and approved by the program steering committee
  - additional credit hours appropriate to a candidate's program, and approved by the program steering committee, to be chosen from graduate course offerings at Memorial University of Newfoundland, CBU, or any other university to complete the required 30 credit hours for the comprehensive-course route
- iv. normally, candidates will be permitted to register for E6590 only after all other course requirements have been met
- v. candidates who have successfully completed the CBU graduate level Certificate in Education (Technology) will be given advanced standing credit for the 9 CBU EDU course credit requirements for the thesis route or 12 CBU EDU course credit requirements for the comprehensive course-route on this program
- vi. candidates who have successfully completed the former CBU EDU 534 and/or EDU 543 with at least a CBU grade of B (70%) toward the CBU graduate level Certificate in Education (Technology) prior to September 2000, will receive up to 12 advanced standing credit hours appropriate to their degree option (EDU 534 will be considered equivalent to EDU 531 and EDU 533, and EDU 543 equivalent to EDU 535 and EDU 537)
- vii. thesis-route candidates will be subject to **Theses and Reports** of the School of Graduate Studies, Memorial University of Newfoundland, supervised by a faculty member at Memorial University of Newfoundland, and where feasible co-supervised by a CBU faculty member.

#### Courses

A selection of the following graduate courses shall be offered to meet the requirements of candidates, as far as the resources of the Faculty allow:

- 6100 Research Designs and Methods in Education
- 6104 Foundations of Program Evaluation
- 6105 Social and Cultural Difference and Education
- 6106 Reading and Teaching Popular Culture
- 6107 Arts Education: Creativity in the Classroom
- 6108 Literacy and Language Education
- 6201 Philosophical Orientations to Educational Leadership (1 credit hour)
- 6202 Social Context of Educational Leadership
- 6203 Leadership: Theory and Practice
- 6204 Educational Administration: Theory and Practice
- 6205 Educational Policy: Theory and Practice
- 6290 Research and Development Seminar in Educational Leadership Studies
- 6291 Internship in Educational Leadership Studies (6 credit hours)

6292 Project in Educational Leadership Studies (6 credit hours)  
 6293 Paper Folio in Educational Leadership Studies (6 credit hours)  
 6300 Teaching and Learning  
 6311 Administrative Theory and Practice II  
 6320 Human Resource Development I: Personnel Administration  
 6321 Supervisory Processes in Education  
 6322 Human Resource Development III: Performance Appraisal of Educational Personnel  
 6330 Educational Finance  
 6335 Legal Foundations of Educational Administration  
 6340 School Business Administration  
 6390 Research and Development Seminar in Curriculum, Teaching and Learning Studies  
 6391 Internship in Curriculum, Teaching and Learning Studies (6 credit hours)  
 6392 Project in Curriculum, Teaching and Learning Studies (6 credit hours)  
 6393 Paper Folio in Curriculum, Teaching and Learning Studies (6 credit hours)  
 6410 Seminar on Philosophical Issues in Educational Policy and Leadership  
 6415 The Process of Educational Policy: An Historical Approach to Policy Studies  
 6420 Ethical Issues and Perspectives in Educational Practice and Policy  
 6425 Comparative Perspectives in Public Education, Reform, and Leadership  
 6426 Computer Applications in Educational Administration  
 6427 School-Community Partnerships  
 6428 Administration of Student Services  
 6430 The Sociology of School and Classroom Life: Policy Implications  
 6435 Culture, Socialization and Schooling: Policy Issues and Implications  
 6440 Family-School Relations: Leadership and Policy Implications  
 6445 The Basics of Policy Analysis in Education  
 6450 Educational Policy Analysis in Practice  
 6455 Policy Analysis: A Comparative Perspective  
 6460 Policy Analysis: Reporting and Implementing  
 6461 Advanced Policy Analysis  
 6465 School Violence: Leadership and Policy Implications  
 6466 Qualitative Research Methods  
 6467 Quantitative Research Methods  
 6468 Critical Approaches to Educational Research  
 6469 Theoretical and Methodological Foundations of Action Research  
 6501 Field Experience in Educational Administration  
 6502 Contexts of Music Education  
 6503 Teaching Music from the Podium  
 6504 Musicianship, Pedagogy, and Learning  
 6590 Research and Development Seminar in Information Technology in Education  
 6600 Learning and Motivation  
 6602 Curriculum Studies  
 6610 Research on Computers in the Curriculum (Prerequisite: 6620)  
 6615 Educational Software Prototyping and Evaluation  
 6620 Issues and Trends in Educational Computing  
 6630 Critical Issues in Mathematics Education  
 6631 Current Research in Teaching and Learning of Secondary Mathematics (Prerequisite: 6630)  
 6632 Current Research in Teaching and Learning of Elementary School Mathematics (Prerequisite: 6630)  
 6633 Current Research in Technology in Mathematics Education (Prerequisite: 6630)  
 6634 Teaching and Learning to Solve Mathematics Problems  
 6635 Teaching and Learning Geometry  
 6636 Teaching and Learning the Concept of Number and Operations  
 6637 Teaching and Learning Algebra  
 6638 Using Diagnostic Teaching in Mathematics Education  
 6639 Technology and the Teaching and Learning of Mathematics  
 6640 Text Interpretation  
 6641 Writing in the Primary, Elementary and Secondary Schools  
 6642 Developmental Reading (K-8)  
 6643 Contemporary Issues in Secondary English  
 6644 Drama in the Secondary School  
 6645 Literature for Children and Adolescents  
 6646 Literature in the Secondary School  
 6647 Diagnosis and Remediation of Reading and Writing Difficulties  
 6648 Drama in the Primary and Elementary Schools  
 6649 Exploring Multiple Literacies  
 6650 Current Issues in Science Education  
 6653 Contemporary Issues in Science Education I  
 6655 The Nature of Science and Science Education  
 6656 Research in Science Education  
 6658 Teaching and Learning Scientific Concepts, Laws and Theories  
 6660 Information Technology  
 6661 Applications of Media in Education  
 6662 Research Seminar in Teacher-Librarianship  
 6663 The Organization of Learning Resources  
 6664 Seminar in School Improvement  
 6665 Second Language Curriculum  
 6666 Research in Second Language Education  
 6667 Second Language Instruction  
 6668 Current Issues in Second Language Education  
 6670 Teaching and Learning Social Studies  
 6671 Research in Social Studies Education  
 6672 Issues and Trends in Social Studies  
 6675 Current Issues in Rural Education

6680 Cognition in Education: Foundations  
 6681 Cognition in Education: Specialist Research Methods  
 6685 Cognition in Education: Argumentative Reasoning (Prerequisite: 6680)  
 6686 Cognition in Education: Assessment (Prerequisites: 6680, 6681)  
 6687 Cognition in Education: Specific Cognitive Disabilities (Prerequisite: 6680)  
 6688 Cognition in Education: Interring From Text (Prerequisite: 6680)  
 6689 Cognition in Education: Instruction (Prerequisite: 6680)  
 6690 Cognition in Education: Motivation (Prerequisite: 6680)  
 6691 Cognition in Education: Metacognition (Prerequisite: 6680)  
 6692 Cognition in Education: Social Cognition (Prerequisite: 6680)  
 6693 Literacy for the Young Child in Home and School  
 6700 Ethical and Legal Issues in Counselling  
 6701 Issues and Methodologies in Learning and Developmental Research  
 6702 Counselling: Theory and Practice  
 6703 Personal and Professional Development Group (Non-Credit)  
 6704 Counselling II: Theory and Practicum  
 6705 Nature and Development of School Counselling Services  
 6706 Career Education and Career Counselling  
 6707 Assessment for Counsellors (1 credit hour)  
 6708 Group Counselling: Theory and Practice  
 6709 Assessment of Intelligence and Learning Skills  
 6710 Development and Implementation of Special Education Policy and Programs  
 6711 Behavior Modification in the Educational Setting  
 6712 The Nature and Assessment of Behaviour Disorders in Children and Adolescents  
 6713 Educational Applications of Contemporary Cognitive Psychology  
 6714 Principles and Practices in Exceptionality  
 6715 The Theory and Practice of Peer Helping Programs  
 6716 Working with Families and Parents  
 6717 Counselling Adolescents  
 6718 Elementary School Counselling  
 6719 Cultural Issues in Counselling  
 6720 Internship in Counselling Psychology (9 credit hours)  
 6750 Professional Practices and Consultation in School Psychology (1 credit hour)  
 6751 Principles and Procedures of Psychoeducational Assessment (1 credit hour)  
 6753 Practicum in School Psychology  
 6754 The Physiology and Psychology of Reading  
 6755 Nature and Assessment of Learning Disabilities  
 6756 Identification and Remediation of Problems in Learning Mathematics in Grades K-8  
 6757 Advanced Studies of Developmental Disabilities  
 6758 Theory of Educational Measurement  
 6801 Foundations of Post-Secondary Programs  
 6802 Adult Learning and Development  
 6803 Research in Post-Secondary Education  
 6804 Leadership and Human Resource Development in Post-Secondary Education  
 6805 Advanced Human Resource Communications  
 6806 Interprofessional Education in the Health Professions  
 6822 Foundations of Instructional Design in Post-Secondary Education  
 6823 Principles of Program Design and Development  
 6831 Organization and Administration of Student Services for the Adult Learner  
 6832 Issues and Trends in the Administration of Post-Secondary Education  
 6840 Counselling Communities  
 6841 Student Development Theory, Services and Programs in Post-Secondary Education  
 6890 Research and Development Seminar in Post-Secondary Studies  
 6891 Internship in Post-Secondary Studies (6 credit hours)  
 6900-6910. Special Topics  
 6911 Multiage Education: An Introduction  
 6912-6950 Special Topics  
 6913 Classroom Inquiry/Action Research (Prerequisite: 6469 Theoretical and Methodological Foundations of Action Research)  
 6940 Administration of Student Services in Post-Secondary Education

## 9 Regulations Governing the Degree of Master of Employment Relations

### Professor and Director

M. Withey

The Master of Employment Relations (MER) is a multi-disciplinary program providing advanced level study of all aspects of the employment relationship.

The MER program is offered by full-time or part-time study and involves 30 credit hours of course work, including a major supervised paper. Candidates registered on a full-time basis will normally complete the program in one academic year.

The following regulations must be read in conjunction with the **General Regulations** of the School of Graduate Studies of Memorial University of Newfoundland.

### 9.1 Administration

1. The program shall be administered by a Director, who shall be appointed by the Dean of Graduate Studies on the recommendation of the Deans of Arts and Business Administration. In making this recommendation, the Deans of Arts and Business Administration shall consult with the employment relations community both within and outside the University.
2. The Director shall be responsible to a Graduate Committee in Employment Relations (GCER) for the purposes of administering the program. The GCER shall consist of five members appointed by the Dean of Graduate Studies on the recommendation of the



Director. The GCER will include the Director, who shall chair the committee, and two faculty members from each of the Faculties of Arts and Business Administration.

3. An Advisory Board in Employment Relations (ABER) shall be established for the purposes of consulting with and obtaining feedback from the employment relations community. The ABER will consist of a broad cross-section of members from the employment relations community both within and outside the University who shall be appointed by the Dean of Graduate Studies on the recommendation of the Director.

## 9.2 Qualifications for Admission

1. Admission is limited and competitive.
2. To be considered for admission to the MER program, an applicant shall have:
  - a. An undergraduate degree, with a minimum B standing, from an institution recognized by Senate; and
  - b. An undergraduate course in organizational behaviour and microeconomics, from an institution recognized by Senate, with a minimum B standing in each course.
3. In exceptional cases, applicants who have not completed an undergraduate degree, but who meet all other requirements, may be considered for admission. Preference will be given to those who have a minimum of 10 years of full-time professional experience, including demonstrated success in employment relations, and who have successfully completed substantial university coursework including several courses at an advanced undergraduate level from an institution recognized by Senate. Applicants without an undergraduate degree must have completed one or more undergraduate courses in organizational behavioural and microeconomics, from an institution recognized by Senate, with a minimum B standing in each course. Any applicants who do not meet normal admission requirements, may also be required to successfully complete the GMAT or the GRE with an acceptable score and/or additional undergraduate courses before being considered for admission.
4. applicants are strongly encouraged to complete an introductory course in statistics prior to admission.

## 9.3 Deadlines for Applications

1. Applicants seeking full-time enrolment will normally only be admitted to the program in the Fall (September) semester.
2. Applications must be postmarked no later than February 15 for applicants wishing to enter full-time or part-time studies in the Fall (September) semester.
3. Applications must be postmarked not later than August 15 for applicants wishing to enter part-time studies in the Winter (January) semester.
4. Individuals submitting applications later than the above dates are not assured of consideration for admission to the program in the semester desired; their applications will be processed only if time and resources permit.

## 9.4 Procedure for Admission

1. Applications for admission to the MER program must be made on the appropriate form and submitted to the School of Graduate Studies.
2. The following documents must be submitted in support of the official application form:
  - a. Letter of appraisal from three referees, at least one of whom is capable of appraising the applicant's academic potential as a graduate student, and at least one of whom is capable of appraising the applicant's professional experience and/or actual or likely success in a career in employment relations.
  - b. Two copies of the MER Employment Experience Information Form.
  - c. Two official transcripts from each university or other post-secondary institution previously attended, to be sent directly by its Registrar (or equivalent officer) to the School of Graduate Studies. If not recorded on the transcript, official evidence of completion of undergraduate degree must also be submitted.
3. Application files are normally evaluated after the deadline dates for application noted above and only when all required documentation has been received.
4. Admission shall be by the Dean of Graduate Studies on the recommendation of the GCER. Upon notification from the Dean of the School of Graduate Studies of acceptance into the MER program, applicants must give written notice to the School of Graduate Studies of their intention to register.

## 9.5 Program of Study

1. The MER program consists of 33 credit hours of course work as specified in Table I. These include 27 credit hours of compulsory courses and 6 credit hours of elective courses. The compulsory courses are comprised of 18 credit hours of core courses specified in Table II and 9 credit hours for a research seminar.
2. The compulsory core courses introduce students to the three main areas of study in the program: labour-management relations; human resources management; and labour market and social policy analysis.
3. Electives allow students to specialize in one or more of the three main areas of study. Electives must be chosen from the list of approved electives specified in Table III. Other courses may be approved and added to Table III from time to time by the GCER.
4. Candidates are responsible for fulfilling all pre-requisites and may require special permission from the Department offering an elective to enrol in the course.
5. The Research Seminar in Employment Relations provides students with both quantitative and qualitative research skills and requires the identification of a research problem, the development and execution of a methodology appropriate to addressing the problem, analysis of results, and completion of final report. The Research Seminar involves 3 credit hours of course work in each of the Fall, Winter and Spring semesters.
6. Candidates enrolled in Research Seminar in Employment Relations will normally have completed an introductory course in statistics. If candidates' records suggest a deficiency in statistics, the GCER reserves the right to require that they complete a foundation course in statistics as part of, and to be completed during, their program.
7. The prerequisites for EMRE 6030 are EMRE 6010 and EMRE 6020. In addition, students will normally complete six MER courses before registering for EMRE 6030. There are no prerequisites for EMRE 6010 and EMRE 6020 but students are advised to take these courses late in their programs, just before taking EMRE 6030. For the core courses, the prerequisite for BUSI 9329 is BUSI 8210. For the remaining core courses, there are no prerequisites. For the elective courses, departmental regulations that specify particular courses as prerequisites will apply but the departmental requirement to have completed a number of courses will not

apply.

8. A waiver of a core course may be granted by the Dean of Graduate Studies on the recommendation of the GCER if the candidate can demonstrate that the material in the course has been substantially covered by other courses taken at this or another recognized university. In such cases, the course must be replaced by another course offered by Memorial University of Newfoundland in consultation with the candidate, and approved by the GCER. The maximum number of core courses that can be waived is 3 and all replacement courses must be taken during the candidate's period of enrollment in the program.
9. Each student's program of study must be approved by the GCER. The GCER reserves the right to restrict candidates from taking particular courses if it is deemed that those courses do not add sufficient value beyond courses that the candidate has completed at the undergraduate level.

## 9.6 Evaluation

1. Candidates for the MER Degree must obtain a grade of B or better in all program courses.
2. Candidates who receive a grade of less than B in a program course will be permitted to remain in the program, provided the course is repeated and passed with a grade of B or better. Alternatively, the candidate may, on the recommendation of the GCER, and with the approval of the Dean of Graduate Studies, substitute another graduate course. Only one course repetition or substitution will be permitted during the candidate's program after which the candidate shall be required to withdraw from the program.

## 9.7 Courses

The schedule of courses for the MER program is as follows:

**Table I - Master of Employment Relations Schedule of Courses**

<p><b>Term I (Fall)</b> Three core courses from Table II One elective from Table III Employment Relations 6010 Research Seminar in Employment Relations I</p> <p><b>Term III (Spring)</b> Employment Relations 6030 Research Seminar in Employment Relations III</p>	<p><b>Term II (Winter)</b> Three core courses from Table II One elective from Table III Employment Relations 6020 Research Seminar in Employment Relations II</p>
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**Table II - Master of Employment Relations Core Courses**

<p>Business 8204 Human Resource Management Business 8210 Labour Relations Business 9329 Labour Law</p>	<p>Economics 6030 Labour Market Economics History 6075 Advanced Studies in Labour and Working-Class History Sociology 6360 Sociology of Work</p>
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**Table III - Master of Employment Relations Elective Courses**

<p><b>Labour-Management Relations</b> Business 9013 Collective Agreement Administration and Arbitration</p> <p><b>Human Resource Management</b> Business 8104 Organizations: Behaviour and Structure Business 8208 Strategic Management Business 8209 Management Skills Business 9020 International Human Resource Management Business 9311 Seminar in Human Resource Management [Prerequisite: 8204] Business 9317 Current Topics in Management Business 9328 Change Management Education 6203 Leadership: Theory and Practice Education 6600 Learning and Motivation Education 6706 Career Education and Career Counselling Education 6802 Adult Learning and Development Psychology 6401 Attitudes and Social Cognition Psychology 6402 Group Processes</p>	<p><b>Labour Market and Social Policy Analysis</b> Business 8108 Economics for Business Business 9306 International Strategic Management Economics 6000 Advanced Micro-economic Theory Economics 6001 Advanced Macro-economic Theory History 6000 Advanced Studies in Newfoundland History History 6070 Advanced Studies in Social History History 6090 Advanced Studies in Women's History History 6120 Advanced Studies in Economic and Business History Political Science 6700 Canadian Politics Political Science 6770 Canadian Provincial Politics Sociology 6320 Gender and Society Sociology 6370 Feminist Theory and Methods Social Work 6230 Seminar in Community Development Women's Studies 6000 Feminist Theory</p>
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NOTE: Students may require special permission from the graduate program prior to enrolling in a course

## 10 Regulations Governing the Degree of Master of Engineering

### Professor and Dean

R. Gosine

### Professor and Associate Dean (Graduate Studies and Research)

R. Venkatesan

The degree of Master of Engineering may be obtained either through full-time or part-time studies. The M.Eng. degree can be obtained through programs in the following disciplines: Civil Engineering; Electrical and Computer Engineering; Mechanical Engineering; and Naval Architectural and Ocean Engineering. At present, the following interdisciplinary research areas are active in the Faculty: Engineering Analysis; Environmental and Hydrotechnical Studies; Manufacturing and Robotics; Mechanics, Structures and Materials; and Ocean Engineering. The interdisciplinary area of Ocean Engineering has been and continues to be a major strength for graduate studies and research in the Faculty of Engineering and Applied Science.

### 10.1 Qualifications for Admission

To be considered for admission, an applicant shall meet the requirements set out in General Regulation, **Qualification for Admission**,

or shall have qualifications and/or engineering experience that is acceptable to the Dean of Graduate Studies and to the Faculty of Engineering and Applied Science.

Admission to the M.Eng. program is limited and competitive. All applicants must meet the minimum qualifications set out in the above paragraph. Decisions on admission, however, will also take into account such things as the applicant's rank in class, referees' assessments, general performance throughout the applicant's undergraduate academic program and the availability of supervisors in the area of the applicant's interest.

Normally applicants will be considered in January for admission to the following September. In special cases applicants may also be considered in April and August. Applications should be made sufficiently far in advance to permit the University to obtain all relevant documents and review the application.

## 10.2 Program of Study and Research

1. Students enrolled in the Master of Engineering program will work in one of the following disciplines: Civil Engineering; Electrical and Computer Engineering; Mechanical Engineering; Ocean and Naval Architectural Engineering.
2. A program shall normally consist of:
  - a. a thesis related to the area of study
  - b. a minimum of 15 credit hours, at least 12 credit hours of which must be from graduate courses. Three credit hours may be taken from undergraduate courses approved for the student's program by the Dean of Graduate Studies on the recommendation of the Faculty of Engineering and Applied Science
  - c. Seminar course 9100
  - d. such other courses as may be required in an individual's program.

For students enrolled in the Electrical and Computer Engineering, Mechanical Engineering, or Ocean and Naval Architectural Engineering disciplines, a program shall normally include at least 9 credit hours from courses chosen from the core courses listed in 3. below; for students enrolled in the Civil Engineering discipline, a program shall normally include at least 6 credit hours from courses chosen from the core courses listed in 3. below.

3. The following are core courses:  
ENG. 9002, 9015, 9210, 9420, 9501, 9505, 9516, 9520, 9550, 9609, 9816, 9821, 9826, 9827, 9834, 9847, 9861, 9867, 9871, 9876, 9901, 9940.
4. The thesis is to contain the results of a systematic investigation which has been conducted by the candidate under the direction of the supervisor.
5. With the approval of the Dean of Graduate Studies and on the recommendation of the Faculty of Engineering and Applied Science, credit towards the course requirements may be considered for graduate courses previously taken by the student in accordance with the **General Regulations** for course credit transfers.

## 10.3 Supervision

1. Each student shall be assigned to a supervisor approved by the Dean of Graduate Studies on the recommendation of the Faculty of Engineering and Applied Science.
2. The supervisor shall propose a tentative program of study and topic of investigation which must be approved by the Dean of Graduate Studies acting on the recommendation of the Faculty of Engineering and Applied Science, before the acceptance of a student in the program.
3. At the end of each semester, the supervisor shall report on the student's progress to the Dean of Engineering and Applied Science for onward transmission to the Dean of Graduate Studies.
4. A temporary or permanent change of supervisor for a student already in a program shall be permitted only with the approval of the Dean of Graduate Studies and the Dean of Engineering and Applied Science.
5. The supervisor shall advise the student in the preparation and presentation of a seminar on the student's topic of investigation as described in **Thesis**, 2. below.

## 10.4 Industrial Internship Option

The Faculty encourages graduate students to undertake internships of work in industry. Internships in industry will permit students either (a) to focus on the practicalities of research projects which have been well defined before the student enters an internship, or (b) to develop and define a research project from problems experienced during the internship. Encouragement to undertake an internship will be given only where it is clear that one of these expectations can be met.

Students registered in the M.Eng. program may, with the permission of their supervisor, the Dean of the Faculty of Engineering and Applied Science, and the Dean of Graduate Studies select the Industrial Internship Option. Students registered in the option must satisfy the degree regulations for an M.Eng. program. In addition, students in the Industrial Internship Option:

- must take at least 9 credit hours of the courses required for their program on campus: the remaining required courses may be taken on or away from campus: those taken at other universities require pre-approval by the Dean of the School of Graduate Studies on the recommendation of the Faculty of Engineering and Applied Science
- shall normally spend 8 to 12 months of their program at an internship in industry
- shall normally spend at least two semesters on campus on a full-time basis as a graduate student at this university
- shall submit a concise progress report to their supervisors, no later than the end of each semester while on an internship

## 10.5 Fast-Track Option

Students registered in academic term 7 of a Memorial undergraduate engineering program are eligible to apply for admission to an M.Eng. fast-track option. The purpose of the option is to encourage students interested in pursuing graduate studies to begin their research-related activities while still registered as an undergraduate student. Normally, to be considered for admission to the option, students must have achieved at least a 70% average over academic terms 1 to 6 of their undergraduate engineering program. While enrolled in the option, a student may complete some of the M.Eng. degree requirements and, hence, potentially be able to graduate earlier from the M.Eng. program.

Students shall enroll in the M.Eng. fast-track option concurrently with their undergraduate program during the fall semester prior to academic term 8. Prior to entering the fast-track option, students must apply for and receive an exemption from work term 6. While enrolled in the option a student must be registered in full-time graduate studies during the fall semester prior to academic term 8; during academic term 8, the student must take a leave of absence from the graduate program. A student enrolled in the fast-track option shall

undertake research related to their field of study and shall normally complete at least 3 credit hours from the courses listed for their M.Eng. program in the fall semester prior to academic term 8.

In the Fall semester following academic term 7, fast-track option students will pay only the graduate fees appropriate to graduate students following plan A of **Fees and Charges** (i.e., the 6 semester plan). In the succeeding winter semester, while completing academic term 8 of their undergraduate program, fast-track option students will pay only the appropriate undergraduate fees.

Upon completion of their undergraduate program, students may register in the M.Eng. program on a full-time basis. All courses taken as part of their graduate program while enrolled in the M.Eng. fast-track option are credited towards the M.Eng. degree course credit hour requirements. Courses taken as credit towards a student's undergraduate degree may not be credited towards a student's graduate degree; courses credited towards a student's graduate degree may not be credited towards a student's undergraduate degree. Students who do not complete their undergraduate degree within one year of entering the fast-track option will normally be required to withdraw from their M.Eng. program.

## 10.6 Course Evaluation

1. In order to continue in the program, a student shall obtain an A or B grade in each course taken for credit.
2. The student's achievement in the program must be to the satisfaction of the Dean of Graduate Studies and the Faculty of Engineering and Applied Science. When it has been determined on the basis of consultations with the student, the course instructors and the supervisor, that a student's work has fallen below satisfactory level, he/she may be required to withdraw from the program.

## 10.7 Thesis

1. A student who expects to graduate must inform the Dean of Graduate Studies of this intention at least three months before the University Convocation at which the award of the degree is expected.
2. Before the thesis is submitted, the student shall present an open seminar on the topic of investigation to the Faculty of Engineering and Applied Science. Any serious deficiencies noticed at this stage should be carefully considered, in consultation with the supervisor, for rectification.
3. Three copies of the thesis shall be submitted to the School of Graduate Studies through the Faculty of Engineering and Applied Science, in a form and format as specified in the Thesis Guide issued by the School of Graduate Studies and the Presentation of Theses Guide issued by the Faculty of Engineering and Applied Science. A submission which does not meet the specifications will be returned to the candidate.
4. Examiners shall be appointed by the Dean of Graduate Studies on the recommendation of the Faculty of Engineering and Applied Science soon after the student has expressed an intention to submit the thesis.

## 10.8 Evaluation of Theses

Theses evaluation shall be carried out in accordance with **Theses and Reports** of the **General Regulations** governing all students in the School of Graduate Studies.

## 10.9 Recommendation for Awarding Degree

When a student has completed all the requirements for the M.Eng. degree, the Faculty of Engineering and Applied Science shall forward a recommendation to the Dean of Graduate Studies for the award of the degree.

## 10.10 Program in Environmental Engineering and Applied Science

The Faculty of Engineering and Applied Science offers a program in Environmental Engineering and Applied Science. The program is available on a full-time or part-time basis and is open to students with a Science or Engineering background. For details of program requirements for the M.A.Sc. degree in Environmental Engineering and Applied Science refer to the regulations governing the degree of Master of Applied Science in Engineering and Applied Science.

## 10.11 Program in Computer Engineering

The Faculty of Engineering and Applied Science offers a program in Computer Engineering. For details of program requirements for the M.A.Sc. degree in Computer Engineering, refer to the regulations governing the degree of Master of Applied Science.

## 10.12 Program in Environmental Systems Engineering and Management

The Faculty of Engineering and Applied Science offers a program in Environmental Systems Engineering and Management. For the details of the program requirements for the M.A.Sc. degree in Environmental Systems Engineering and Management refer to the regulations governing the degree of Master of Applied Science in Environmental Systems Engineering and Management.

### Courses

A selection of the following graduate courses will be offered to meet the requirements of the candidates, as far as the resources of the Faculty will allow.

#### Required Courses:

9100 Engineering Graduate Seminar (1 cr. hr.)

#### Core Courses\*:

9002 Ocean Engineering Structures  
 9015 Ocean Engineering Hydrodynamics  
 9420 Engineering Analysis  
 9435 Modern Perturbation Theory  
 9501 Finite Element Analysis with Engineering Applications  
 9505 Structural Dynamics and Vibrations  
 9516 Similitude, Modeling and Experimental Data Analysis  
 9520 Solid and Structural Mechanics  
 9550 Fatigue, Fracture and Corrosion  
 9609 Environmental Risk Assessment  
 9717 Hydropower Engineering  
 9816 Antenna Theory  
 9821 Digital Signal Processing

9826 Advanced Control Systems  
 9827 Continuous and Discrete-Event Systems  
 9834 Advanced Power Electronics  
 9847 Computer & Control Methods in Power Systems  
 9861 High-Performance Computer Architecture  
 9865 Advanced Digital Systems  
 9867 Advanced Computing Concepts for Engineering  
 9871 Information Theory and Coding  
 9874 Software Design and Specification  
 9876 Advanced Data Networks  
 9901 Fundamentals of Fluid Dynamics  
 9902 Advanced Transport Phenomena  
 9940 Advanced Robotics

**Other Courses:**

9022 Marine Geotechnical Engineering  
 9052 Ice Properties and Mechanics  
 9090/99 Special Topics in Ocean Engineering  
 9210 Advanced Engineering Materials  
 9390/94 Special Topics in Engineering Management  
 9411 Probabilistic Methods in Engineering  
 9440 Optimization Principles in Engineering  
 9495/99 Special Topics in Engineering Analysis  
 9540/49 Special Topics in Mechanics, Structures & Materials  
 9560 Applied Remote Sensing  
 9601 Environmental Pollution and Mitigation (cross listed as ENVS 6004)  
 9603 Environmental Sampling and Pollutant Analysis (cross listed as ENVS 6005)  
 9605 Advanced Waste Water Treatment  
 9610/15 Special Topics in Environmental Engineering and Applied Science  
 9621 Soil Remediation Engineering  
 9622 Environmental Statistics  
 9624 Air Pollution  
 9625 Offshore Environmental Operations  
 9626 Environmental Management System  
 9627 Environmental Systems Engineering  
 9628 Environmental Laboratory  
 9629 Environmental Policy and Regulations  
 9630 Pollution Prevention  
 9713 Stochastic Hydrology  
 9723 Soil Properties and Behaviour (formerly 9720)  
 9730 Construction Administration  
 9731 Construction Problems and Solutions  
 9742 Transportation Planning  
 9750 Advanced Topics in Analysis and Design of Reinforced Concrete (formerly 9701)  
 9755 Advanced Topics in Precast & Prestressed Concrete (formerly 9702)  
 9760/64 Special Topics in Geotechnical Engineering  
 9790/99 Special Topics in Civil Engineering  
 9802/05 Special Topics in Computer Engineering  
 9806/09 Special Topics in Communications Engineering  
 9815 Electromagnetic Propagation  
 9822 Nonlinear Digital Image Processing and Analysis  
 9825 Random Signals (formerly 9830)  
 9835 Advanced Electric Machines  
 9848 Power System Stability (formerly 9812)  
 9849 Power System Protection  
 9850/53 Special Topics in Power Systems and Controls  
 9866 Fault-Tolerant Computing (formerly 9846)  
 9868 ASIC Design  
 9869 Advanced Concurrent Programming  
 9872 Digital Communications  
 9873 Image Communications  
 9875 Embedded and Real-Time Systems Design  
 9877 Computer and Communications Security  
 9878 Wireless and Mobile Communications  
 9879 Formal Specification and Development  
 9880/83 Special Topics in Computer Engineering  
 9884/87 Special Topics in Signal Processing  
 9888/91 Special Topics in Communications Engineering  
 9892/95 Special Topics in Power Systems and Controls  
 9896/99 Special Topics in Applied Electromagnetics  
 9910 Advanced Manufacturing  
 9920 Advanced Concepts in Mechanical Design  
 9925 Theory & Design of Mechanical Components & Structures  
 9985/89 Special Topics in Manufacturing & Robotics  
 9990/99 Special Topics in Mechanical Engineering

\* Courses likely to be offered annually on a regular basis. Other courses will be offered if required in a student's program and dependent upon Faculty resources.

## 11 Regulations Governing the Degree of Environmental Engineering and Applied Science

See Regulations Governing the Degree of Master of Applied Science in Environmental Engineering and Applied Science.

## 12 Regulations Governing the Degree of Master of Environmental Science

(see also Master of Science in Environmental Science and Master of Applied Science in Environmental Engineering and Applied Science)

### Chair, Board of Studies

Dr. Chris Parrish

### 12.1 Program of Study

1. The Environmental Science Program is an interdisciplinary graduate program involving the science-based departments of Memorial University of Newfoundland and along with the Environmental Engineering Program makes up Memorial University of Newfoundland's Environmental Studies Graduate Program. There are two Environmental Science Graduate degree streams, the Master of Science (M.Sc., Environmental Science) and the Master of Environmental Science (M.Env.Sci).

The program is available on a full-time or part-time basis. Admission is open to students with Science or Engineering backgrounds.

2. The program is offered by the Faculty of Science and is administered by a Board of Studies appointed by the Dean of Science.

### 12.2 Qualifications for Admission

Admission is limited and competitive. To be considered for admission applicants shall normally hold an Honours degree in Science with at least second class standing, or equivalent, or a Bachelor's degree in Engineering from an institution recognized by the Senate or shall have qualifications and/or environmental experience acceptable to the Dean of Graduate Studies and the Board of Studies. The Board of Studies will make recommendations on admission to the Dean of Graduate Studies.

### 12.3 Degree Requirements

1. To the extent that resources permit, individual programs will be developed to suit students' interests and needs. However all programs must be approved by the Board of Studies and by the Dean of Graduate Studies. All **General Regulations** of the School of Graduate Studies shall apply to these degrees.

#### 2. Master of Environmental Science

- a. The Master of Environmental Science is a multidisciplinary course-based degree, focused on environmental issues. The degree program provides for both multidisciplinary courses and for courses focused on the student's specific area of interest.
- b. The degree program requires completion of 27 credit hours.
  - i. Students will be required to take a minimum of 15 credit hours in program courses, 9 credit hours of which must be ENVE/ENVS 6000, ENVS 6009 and ENVS 6010 and 6 credit hours from ENVE/ENVS 6001, 6002 and 6003.
  - ii. Students will be required to take a minimum of 12 credit hours in elective courses approved by the Board of Studies, 9 credit hours of which will normally be selected from graduate courses offered by the Faculties of Science and Engineering and Applied Science. Students are advised to consult with instructors and Faculties regarding necessary prerequisites and availability.

#### 3. Master of Science (Environmental Science)

- a. The Master of Science (Environmental Science) is a research degree which includes a thesis and course work. The thesis research will focus on environmental topics relevant to the student's background, and will be supervised by appropriate faculty, normally in the Faculties of Science and/or Engineering and Applied Science. The course component has two aims: to broaden the students' understanding of environmental issues; and to provide further training in areas of research specialization for the thesis.
- b. Each student will have a Supervisory Committee normally consisting of a Supervisor and two others. The Supervisory Committee will be appointed by the Dean of Graduate Studies on the recommendation of the Board of Studies for Environmental Science.
- c. The program of each student will consist of a minimum of 15 credit hours in program courses which will include ENVE/ENVS 6000 and ENVS 6010. Of the 9 credit hours remaining in program courses, 3 credit hours will be from ENVE/ENVS 6001, 6002 and 6003 and the other credit hours will be related to the student's specialty and will normally be chosen from graduate courses offered by the Faculties of Science, and Engineering and Applied Science.
- d. All students will be required to submit a thesis embodying the results of systematic research on an approved topic. The thesis will be evaluated according to procedures outlined in General Regulation **Theses and Reports**.

#### Courses

ENVE/ENVS 6000 Environmental Science and Technology  
 ENVE/ENVS 6001 Earth & Ocean Systems  
 ENVE/ENVS 6002 Environmental Chemistry and Toxicology  
 ENVE/ENVS 6003 Applied Ecology  
 ENVS 6004 Environmental Pollution and Mitigation (Cross listed as Eng 9601)  
 ENVS 6005 Environmental Sampling and Pollutant Analysis (Cross listed as Eng 9603)  
 ENVS 6007 Environmental Risk Assessment (same as Eng 9609)  
 ENVS 6008 Air Pollution (same as Eng 9624)  
 ENVS 6009 Environmental Science Project  
 ENVS 6010 Environmental Seminar

## 13 Regulations Governing the Degree of Master of Marine Studies (Fisheries Resource Management)

### Program Committee

Dr. Peter Fisher (Fisheries and Marine Institute) - Chair  
 Dr. Michael Wernerheim (Department of Economics, Faculty of Arts)  
 Mr. Cyr Couturier (Fisheries and Marine Institute)  
 Ms. Donna Stapleton (Faculty of Business Administration)  
 Dr. Joe Wroblewski (Ocean Sciences Centre)

### 13.1 Programs

There are two graduate programs in Fisheries Resource Management: the Graduate Diploma and the Master of Marine Studies. The Master's degree requires successful completion of 8 courses plus a major report. The Graduate Diploma requires completion of 6 courses.

The programs are aimed at professionals working in or intending to enter careers in fisheries management. The programs are administered by a Program Committee consisting of five members appointed by the Dean of Graduate Studies.

### 13.2 Graduate Diploma

The Graduate Diploma in Fisheries Resource Management provides an opportunity for fisheries professionals to enhance their perspective on fishery issues from a variety of disciplines.

#### 1. Admission Requirements

To be admitted to the Graduate Diploma in Fisheries Resource Management, a student must be eligible to register in the Master of Marine Studies program (see **Master of Marine Studies, Admission Requirements** below).

#### 2. Program of Study

The program consists of 18 credit hours. Students must complete 6001 plus five other courses chosen from 6002, 6003, 6004, 6005, 6006 and 6007.

#### 3. Evaluation

Candidates for the Graduate Diploma in Fisheries Resource Management must obtain a grade of B or better in all program courses.

### 13.3 Master of Marine Studies

The degree of Master of Marine Studies (Fisheries Resource Management) is a multi-disciplinary program of study that will provide the candidate with exposure to all dimensions of modern fisheries resource management. The program is aimed at professionals working in or intending to enter careers in fisheries management and is available on a full-time or part-time basis. All candidates must take the full complement of 24 credit hours, including a required seminar, plus a major report. Candidates registered on a full-time basis may complete the program in one academic year. Students who have successfully completed the requirements for the Graduate Diploma may elect to continue their program of study in order to earn the Degree.

#### 1. Admission Requirements

- a. Admission to the program is on a competitive basis. To be considered for admission to the program an applicant must normally have an undergraduate degree with a minimum of a high second class standing from an institution recognized by the Senate.
- b. In addition to the academic requirements in a. applicants will normally have a demonstrated commitment to fisheries through employment or experience in a sector of the fishery, in a regulatory agency or government department connected to fisheries, in a non-governmental agency, or through self-employment or consulting activities related to fisheries.
- c. Applicants must submit, along with the normal academic application form, a letter outlining their reasons for applying for admission to the program, their expectations of the program and its anticipated impact on their work and career progression.
- d. In exceptional cases persons who do not meet the requirements specified in a. but who have a significant connection to fisheries and demonstrated equivalent experience acceptable to the Program Committee may be admitted. Such persons will undergo an interview by the Program Committee before being admitted.
- e. Applications for admission in September must be received no later than April 30 of the year in which admission is sought.

#### 2. Program of Study

- a. The program consists of 24 credit hours made up of the courses numbered 6001-6008 listed below, plus a major report. Courses will normally be offered only once in an academic year with four courses offered in the Fall semester and four, including the Seminar course offered in the Winter. Full-time candidates are expected to undertake and complete the work required for the report during the Spring semester.
- b. A waiver of a program course may be granted by the Dean of Graduate Studies on the recommendation of the Program Committee if the candidate can demonstrate to the Program Committee that the course material has been substantially covered by a course taken at this or another recognized university. In such cases the course must be replaced by another course approved by the Program Committee. This replacement course must be taken during the candidate's period of enrolment in the program.

#### 3. Evaluation

- a. Candidates for the Master's Degree must obtain a grade of B or better in all program courses and successfully complete the seminar.
- b. Candidates who have received a grade less than a B in a program course will be permitted to remain in the program, provided the course is retaken and passed with a grade of B or better. Alternatively the candidate may, on the recommendation of the Program Committee, substitute another graduate course. Only one such repeat or substitution will be permitted in the program.
- c. The major report is a fundamental component of the program and will normally be undertaken in the final semester of the program. The topic of the report and a faculty supervisor will be chosen by the candidate in consultation with the Program Committee. The report provides an opportunity to synthesise an original perspective on a selected fisheries issue through the examination of appropriate literature and other sources of information. Normally the report will be multi-disciplinary in nature and will result in a document equivalent to a publishable periodical journal article or a consultant's report on a particular issue. It will be assessed in accordance with General Regulation **Theses and Reports** of the School of Graduate Studies.

**Courses**

6001 Fisheries Ecology  
 6002 Quantitative Methods in Fisheries  
 6003 Fisheries Economics  
 6004 Fisheries Policy  
 6005 Fisheries Planning and Development  
 6006 Business Management for Fisheries  
 6007 Evolution of Fisheries  
 6008 Seminar in Fisheries Management

**14 Regulations Governing the Degree of Master of Music****Professor and Director**

T. Gordon

**Associate Professor and Associate Director**

M. Cheramy

The degree of Master of Music (M.Mus.) is offered by full-time study, normally commencing in the Fall semester. Three areas of specialization are offered: Conducting, Performance and Performance/pedagogy. The specialization of Ethnomusicology is available through the degrees Master of Arts and Doctor of Philosophy. See the section Regulations Governing the Degree of Master of Arts and Specific Program Regulations and the section Regulations Governing the Degree of Doctor of Philosophy and Specific Program Regulations, respectively.

Within the three broad areas of specialization offered for the M.Mus., there is considerable flexibility available to further focus the program to meet specific interests and needs. These programs offer the musician the tools to make accelerated advances in comprehension, skills and abilities as a performing musician or conductor while offering at the same time, insights and experience into the *métier* of the musician/entrepreneur in the modern world. The School of Music has forged active partnerships with many of the professional music organizations and institutions within the arts community in the greater St. John's region which afford an exceptional range of professional experiences to its graduate students. Included among these partners are the Newfoundland Symphony Orchestra, the Canadian Broadcasting Company, Heritage Canada, the Newfoundland and Labrador Arts Council and many others.

Graduate instruction is offered in instrumental and choral conducting, as well as in the following performance media: voice, piano, organ, flute, clarinet, saxophone, oboe, bassoon, trumpet, euphonium, trombone, tuba, percussion, violin, viola, cello and double bass.

**14.1 Qualifications for Admission**

1. Admission regulations and procedures are outlined in the **General Regulations** Governing the School of Graduate Studies and apply to the Master of Music degree. Candidates for admission will normally hold a B.Mus. degree with first-class standing from a recognized university. Applicants with other types of preparation should enquire with the School of Music regarding the likelihood of admission. The deadline for receipt of applications is January 31.
2. In addition to meeting the requirements above, admission is further determined by audition and diagnostic examinations.
  - a. Auditions for September entry will be held in February of each year on the St. John's campus. Where exceptional circumstances prevail and with the approval of the Director, the audition may be submitted as an audio or video recording. The audition will normally be the equivalent of a full-length solo recital (ca. 60 minutes performing time) in the performance medium. The program should display a range of performance styles and repertoire. Prospective candidates should contact the School of Music for details on appropriate repertoire. Applicants to the M.Mus. in Conducting program should submit professional quality video tapes of their work with a minimum of two different types of ensembles. These video tapes should include both rehearsals and performances. Performance tapes should display a range of styles and repertoire.
  - b. Candidates for admission will be required to write diagnostic examinations measuring their skills and knowledge in the standard areas of musical literacy. These include music theory and analysis, aural skills, and music history and literature which includes repertoire knowledge in the performance area. Candidates who display deficiencies in any of these areas may still be considered for admission. Once admitted, however, they will be required to take remedial course work in addition to the required program requirements.

**14.2 Program of Study**

1. All candidates for the degree of Master of Music will be required to register for courses which combine course work, performance or work-study internships and which can normally be completed over two years by full-time study. Recital requirements as specified within each specific program option are considered as thesis equivalents. Comprehensive examinations are not administered. The normal residency period in Conducting may, in some instances, be reduced through summer and intersession study or through a reduction of the credit requirements based on prior professional experience. Candidates for the degree are required to complete the core courses in the first year of the program. Principal and secondary applied course credits make up the largest concentration of program requirements and are intended to be taken over two years. Courses in secondary concentrations and electives make up the balance of the program.
2. All candidates for the M.Mus. degree must complete 36 credit hours which include MU 6001 and MU 6002.
  - a. All candidates in Conducting (Choral Conducting, Instrumental Conducting or Choral/Instrumental Conducting) must also complete the following courses: 6210, 6310, 6100; one of 6006, 6007 or 6008; and a total of six credits from among 6211, 7210, 6212, 6213, 6311, 7310, 6312 or 6313. Of the remaining 12 credit hours in electives, and with the approval of the Associate Director for Graduate Studies in the School of Music, 3 credit hours may be from related disciplines.
  - b. All candidates in Performance (solo voice, instrument or chamber music) must also complete 645A/B, 745A/B; 6700, 6750; 6005 or 6009; and 4 credits from among 646A/B or 6500 or 6501. Of the remaining 6 credit hours in electives, and with the approval of the Associate Director for Graduate Studies in the School of Music, 3 credit hours may be from related disciplines.
  - c. All candidates in Performance/Pedagogy (solo voice or instrument) must also complete 647A/B, 747A/B, 6400, 6600, 6650 and 4 credits from among 646A/B or 6500 or 6501. Of the remaining 6 credit hours in electives, and with the approval of the Associate Director for Graduate Studies in the School of Music, 3 credit hours may be from related disciplines.
  - d. Further courses may be required depending on the background of the individual student.
3. Candidates with concentrations in Choral Conducting, Performance (voice) and Performance/Pedagogy (voice) will be required to demonstrate competence in two of French, German or Italian. Exit examinations in the chosen languages will measure understandings both of diction and translation. (See **General Regulation Evaluation, Evaluation of Graduate Students, 4.**)



Master of Music	Conducting	Performance	Performance/Pedagogy
Common Core	6001-6002	6001-6002	6001-6002
Applied	6210 6310 6 credit hours from among 6211 / 6311 / 7210 / 7310 / 6212 / 6213 / 6312 / 6313	645A/B 745A/B 4 credit hours from among 646A/B / 6500 / 6501	647A/B 747A/B 4 credit hours from among 646A/B / 6500 / 6501
Complementary	6100 6006 or 6007 or 6008	6700 6750 6005 or 6009	6400 6600 6650
Electives	Twelve credit hours, of which 3 may be from related disciplines	Six credit hours	Six credit hours

### 14.3 Evaluation

**GENERAL REGULATIONS** on evaluation, continuance and termination of studies of the School of Graduate Studies pertain to the Master of Music degree. In addition, failure to receive a grade of 75% or higher on any juried performance will lead to termination of the student's program.

#### Courses

A selection of the following graduate courses will be offered to meet the requirements of candidates, as far as the resources of the School will allow.

#### Core courses

6001 Research Methods  
6002 Graduate Seminar

#### Applied courses

6210 Instrumental Conducting I  
6211 Instrumental Conducting II  
6212 Instrumental Conducting Internship I (1 to 3 credit hours)  
6213 Instrumental Conducting Internship II (1 to 3 credit hours)  
6310 Choral Conducting I  
6311 Choral Conducting II  
6312 Choral Conducting Internship I (1 to 3 credit hours)  
6313 Choral Conducting Internship II (1 to 3 credit hours)  
6400 Music Pedagogy  
645A/B Principal Applied Study I (6 credit hours)  
646A/B Secondary Principal Applied Study (4 credit hours)  
647A/B Principal Applied Study I (6 credit hours)  
6500 Chamber Music (2 credit hours per semester. Maximum: 8 credit hours)  
6501 Chamber Music (3 credit hours per semester. Maximum: 12 credit hours)  
6651 Pedagogy Internship II (2 credit hours)  
7210 Instrumental Conducting III  
7310 Choral Conducting III  
745A/B Principal Applied Study II (6 credit hours)  
747A/B Principal Applied Study II (6 credit hours)

#### Complementary courses and electives

6005 Performance Practice  
6006 Instrumental Ensemble Repertoire  
6007 Choral Repertoire  
6008 Orchestral Repertoire  
6009 Music Literature  
6100 Score Study and Analysis  
6600 Pedagogy Seminar  
6650 Pedagogy Internship I (2 credit hours)  
6700 Music Industries Seminar  
6750 Music Industries Internship (2 credit hours)

#### Special Topics Courses

6800-6809  
7800-7809

## 15 Regulations Governing the Degree of Master of Nursing

#### Associate Professor and Director

S. LeFort

#### Associate Director (Graduate Program and Research)

To be determined

### 15.1 Program

1. The responsibility for the administration of all graduate programs shall reside with the Dean of Graduate Studies.
2. Applicants for the program shall be required to apply for admission to the Dean of the School of Graduate Studies and shall be expected to follow the regulations, policies and practices required of the School. Deadline for receipt of applications should be no later than February 15. If space is available, students who apply after the deadline date may be accepted.
3. The School of Nursing offers a Master of Nursing Program with three options: (thesis, non-thesis, and nurse practitioner) as well as a Post Masters Nurse Practitioner Graduate Diploma.

## 15.2 Qualifications for Admission

1. Applicants to the Master of Nursing Program in any of the three options listed above must have a baccalaureate degree in nursing, or an equivalent from an institution recognized by the University and a knowledge of nursing satisfactory to the School of Nursing.
2. Admission to the program is limited and competitive. To be considered for admission, the applicant must have maintained at least a grade B standing in the baccalaureate program.
3. Applicants are also required to have a minimum of one year's experience in nursing practice, and to have completed an undergraduate nursing research course, and a statistics course normally within the last 5 years such as Statistics 2500 or Education 2900 or their equivalents.
4. Applicants must hold a practising licence from the Association of Registered Nurses of Newfoundland and Labrador or must be currently registered as a practising nurse in another Canadian jurisdiction. Applicants from other countries who do not meet the above criteria will be assessed on an individual basis. However, they must submit proof of registration as a practising nurse (or an equivalency) from their country or jurisdiction.
5. In addition to the above requirements, candidates seeking admission to the MN-Nurse Practitioner degree option must have two years of clinical experience preferably in their chosen specialty area. As well, candidates must have a letter from a health care agency and a clinical preceptor guaranteeing the candidate a preceptored clinical placement for the final semester of their program.
6. In addition to requirements 1 and 4, candidates seeking admission to the Post Masters Nurse Practitioner Graduate Diploma program must have completed a Masters Degree in Nursing or an equivalent degree with a nursing focus and have two years of clinical nursing experience preferably in their chosen specialty area. As well, candidates must have a letter from a health care agency and clinical preceptor guaranteeing the candidate a preceptored clinical placement for the final semester of their program.
7. Only in exceptional circumstances and only on the recommendation of the School of Nursing shall the Dean of Graduate Studies consider applicants who do not meet admission requirements listed above.

## 15.3 Registration

See School of Graduate Studies General Regulation **Registration**.

## 15.4 Programs of Study

There are three routes offered that lead to a Master of Nursing degree: 1. Thesis option, 2. Non-thesis option, and 3. Nurse Practitioner option. Normally the program will require two years to complete when taken on a full-time basis.

In addition to the MN degree program, the School of Nursing also offers a Post Masters Nurse Practitioner Graduate Diploma.

### 1. Thesis Option

- a. Candidates must complete an approved program of study consisting of a minimum of 19 credit hours in graduate program courses and a thesis.

**Required courses:**

6010 Research in Nursing I: Quantitative Methods

6011 Philosophical and Theoretical Foundations of Nursing

6100 Research in Nursing II: Qualitative Methods

Either 6200 Nursing Individuals and Families through Life Transitions, and N6210 Nursing Therapeutics for Individuals and Families OR 6220 Concepts for Population-based Nursing, and 6230 Interventions for Population-based Nursing

One nursing elective

- b. Candidates shall submit a thesis on an approved subject in which systematic research has been conducted under the direction of a Supervisor recommended by the Director and approved by the Dean.

- c. The program of each candidate shall be approved by the Dean on the recommendation of the Director.

### 2. Non-thesis Option

- a. Candidates must complete an approved program of study consisting of a minimum of 28 credit hours in graduate program courses and 6 credit hours in a consolidated practicum.

**Required courses:**

6010 Research in Nursing I: Quantitative Methods

6011 Philosophical and Theoretical Foundations of Nursing

6100 Research in Nursing II: Qualitative Methods

6040 Nursing Informatics

Either 6200 Nursing Individuals and Families through Life Transitions and 6210 Nursing Therapeutics for Individuals and Families

OR 6220 Concepts for Population-based Nursing, and 6230 Interventions for Population-based Nursing

**Three of the following courses:**

6020 Program Development in Nursing

6031 Education in Nursing

6050 Leadership in Nursing

6060 Policy and Politics in Nursing and Health Care

Other approved electives

**One of the following consolidated practicums:**

6610, 6611 Practicum in Advanced Clinical Practice

6620, 6621 Practicum in Nursing Administration

6630, 6631 Practicum in Nursing Research/Research Utilization

6640, 6641 Practicum in Health Policy

6650, 6651 Practicum in Nursing Education

The consolidated practicum will normally consist of 300 hours of field experience.

- b. The program of each candidate shall be approved by the Dean on the recommendation of the Director.

### 3. Nurse Practitioner Option

- a. Candidates must complete an approved program of studies consisting of a minimum of 32 credit hours in graduate program courses and an integrated clinical practice experience, comprising 15 credit hours.

**Required courses:**

- 6010 Research in Nursing I: Quantitative Methods
- 6011 Philosophical and Theoretical Foundations of Nursing
- 6100 Research in Nursing II: Qualitative Methods
- 6020 Program Development in Nursing
- 6200 Nursing Individuals and Families through Life Transitions and 6210 Nursing Therapeutics for Individuals and Families
- 6700 Clinical Decision Making (6 credit hours)
- 6701 Advanced Practice Issues and Role Development (2 credit hours)
- 6702 Advanced Clinical Practicum I (96 hours of clinical practice in various health care settings) (3 credit hours)
- One of: 6800 to 6809 Nursing Specialty Option Courses (3 credit hours)
- 690X Advanced Clinical Practicum II (The integrated practice component will normally consist of a minimum of 500 hours of preceptored specialty clinical practice and biweekly seminars) (15 credit hours)

b. The program of each candidate shall be approved by the Dean on the recommendation of the Director.

**4. Post Masters Nurse Practitioner Graduate Diploma**

a. Candidates with a Master's degree in Nursing or an equivalent degree with a nursing focus must complete an approved program of study consisting of a minimum of 14 credit hours in graduate program courses and integrated clinical practice experience, comprising 15 credit hours.

**Required courses:**

- 6700 Clinical Decision Making (6 credit hours)
- 6701 Advanced Practice Issues and Role Development (2 credit hours)
- 6702 Advanced Clinical Practicum I (96 hours of clinical practice in various health care settings) (3 credit hours)
- One of: 6800 to 6809 Nursing Specialty Option Courses (3 credit hours)
- 690X Advanced Clinical Practicum II (The integrated practice component will normally consist of a minimum of 500 hours of preceptored specialty clinical practice and biweekly seminars) (15 credit hours)

b. Programs for some candidates may exceed the above minimum requirements.

c. The program for each candidate shall be approved by the Dean on the recommendation of the Director.

**15.5 Evaluation**

1. In order to continue in graduate studies and in order to qualify for a Master's degree, a candidate shall obtain an A or B grade in each program course.
2. If the candidate is in the Non-thesis Option, the candidate must obtain a Pass grade for the practicum component of the program.
3. When the Director of the School of Nursing has determined on the basis of consultation with the candidate, the Associate Director, Graduate Program and Research, and the thesis or practicum Supervisor, that a candidate has fallen below a satisfactory level, the Director may recommend to the Dean that such a candidate be required to withdraw from the program.
4. To remain in good standing candidates are required to maintain professional behaviour consistent with the current Code of Ethics of the Canadian Nurses Association and, when applicable, the Tri-Council Policy Statement: Ethical Conduct for Research Involving Humans. Candidates who fail to meet this requirement will be required to withdraw from the School of Nursing upon recommendation of the Graduate Studies Committee.

**15.6 Thesis**

See School of Graduate Studies General Regulation **Theses and Reports**.

**Courses**

A selection of the following graduate courses will be offered to meet the requirements of candidates as far as the resources of the School of Nursing will allow:

- 6010 Research in Nursing I: Quantitative Methods (4 credit hours)
- 6011 Philosophical and Theoretical Foundations of Nursing (3 credit hours)
- 6020 Program Development in Nursing (3 credits hours) (Pre or co-requisite: 6011)
- 6031 Education in Nursing (3 credit hours) (Not required by students who have completed 6030. Credit may not be obtained for both 6030 and 6031)
- 6040 Nursing Informatics (3 credit hours)
- 6050 Leadership in Nursing (3 credit hours)
- 6060 Policy and Politics in Nursing and Health Care (3 credit hours)
- 6100 Research in Nursing II: Qualitative Methods (3 credit hours)
- 6200 Nursing Individuals and Families through Life Transitions (3 credit hours). Pre or co-requisite: 6011 (Not required by students who have completed 6400)
- 6210 Nursing Therapeutics for Individuals and Families (3 credit hours) Pre or co-requisite: 6200 (Not required by students who have completed 6400)
- 6220 Concepts for Population-Based Nursing (3 credit hours) Prerequisites: 6011 (Not required by students who have completed 6410)
- 6230 Interventions for Population-Based Nursing (3 credit hours) Pre or co-requisite: 6220 (Not required by students who have completed 6410)
- 6310-6350 Special Topics in Nursing (electives)
- 6501-10 Individual Readings and Research in Special Areas
- 6610-6611 Practicum in Advanced Clinical Practice (6 credit hours) (Prerequisites: All required and elective courses including 6020 and 6050)
- 6620-6621 Practicum in Nursing Administration (6 credit hours) (Prerequisites: All required and elective courses including 6050 and 6060)
- 6630-6631 Practicum in Nursing Research/Research Utilization (6 credit hours) (Prerequisites: All required and elective courses including 6060)
- 6640-6641 Practicum in Health Policy (6 credit hours) (Prerequisites: All required and elective courses including 6050 and 6060)
- 6650-6651 Practicum in Nursing Education (6 credit hours) (Prerequisites: All required and elective courses including 6020 and 6031)
- 6700 Clinical Decision Making (6 credit hours)
- 6701 Advanced Practice Issues and Role Development (2 credit hours)
- 6702 Advanced Clinical Practicum I (96 hours of clinical practice in various health care settings) (3 credit hours)
- One of: 6800 to 6809 Nursing Specialty Option Courses (3 credit hours)
- 690X Advanced Clinical Practicum II (The integrated practice component will normally consist of a minimum of 500 hours of preceptored specialty clinical practice and biweekly seminars)(15 credit hours)

## 16 Regulations Governing the Degree of Master of Oil and Gas Studies

### Professor and Academic Director

To be determined

The Master of Oil and Gas Studies (MOGS) is a comprehensive, multi-disciplinary academic program that provides a broad and fundamental knowledge of the entire oil and gas industry value chain.

The MOGS program is offered by full-time study and involves 31 credit hours of course work, including a seminar course and an integrative case study. Candidates registered on a full-time basis will normally complete the program in one academic year.

The following regulations must be read in conjunction with the **General Regulations** of the School of Graduate Studies of Memorial University of Newfoundland.

### 16.1 Administration

1. The program shall be administered by an Academic Director, who shall be appointed by the Dean of Graduate Studies following discussion with the Executive Director of the Oil and Gas Development Partnership (OGDP).
2. The Academic Director shall be the Chair of a Board of Studies for MOGS for the purposes of administering the program. The Board of Studies will consist of one member from each of the Faculties of Arts, Business Administration, Engineering and Applied Science, and Science, and the Executive Director of the OGDP (*ex officio*). Appointments of the members of the Board of Studies will be by the Dean of Graduate Studies following discussion with the Executive Director OGDP. Normally all appointments will be for a period of three (3) years.
3. A MOGS Advisory Board, composed of a broad cross-section of members from both industry and Memorial University of Newfoundland, shall be appointed. This Advisory Board will consult with industry and provide feedback on the contents, instruction and future direction of the MOGS program. The Academic Director and the Executive Director OGDP will be *ex officio* members of the Advisory Board, and will recommend the appointment of the Advisory Board members to the Dean of Graduate Studies, who will also be an *ex officio* member of the Advisory Board.

### 16.2 Qualifications for Admission

1. Admission is limited and competitive.
2. To be considered for admission to the MOGS program, an applicant shall normally have:
  - a. An undergraduate degree, in an oil and gas cognate discipline, with a minimum B standing, from an institution recognized by Senate; and
  - b. A minimum of five (5) years employment experience in the oil and gas sector.
3. In exceptional cases, applicants who have not completed an undergraduate degree may be considered for admission. Non-degree holding applicants must demonstrate significant professional experience and success in the oil and gas sector and have completed a significant portion of discipline related courses of the undergraduate degree program that meets the criteria in regulation 2.a. above.

### 16.3 Deadlines for Applications

While the deadline for submission of applications for candidates wishing to enter full-time studies in the Fall (September) Semester is March 15, applications received after that date will be considered as time and resources permit.

### 16.4 Procedure for Admission

1. Applications for admission to the MOGS program must be made on the appropriate form and submitted to the School of Graduate Studies.
2. The following documents must be submitted in support of the official application form:
  - a. Letter of appraisal from three referees, at least one of whom is capable of appraising the applicant's academic potential as a graduate student, and at least one of whom is capable of appraising the applicant's professional experience and/or actual or likely success in a career in the oil and gas sector.
  - b. Two official transcripts from each university or other post-secondary institution previously attended, to be sent directly by its Registrar (or equivalent officer) to the School of Graduate Studies. If not recorded on the transcript, official evidence of completion of an undergraduate degree must also be submitted.
3. Application files are normally evaluated after the deadline dates for application noted above and only when all required documentation has been received.
4. Admission shall be by the Dean of Graduate Studies on the recommendation of the Board of Studies. Upon notification from the Dean of Graduate Studies of acceptance into the MOGS program, applicants must, within thirty (calendar) days, give written notice to the School of Graduate Studies of their intention to register.

### 16.5 Program of Study

1. The MOGS program consists of 31 credit hours of course work. These include four compulsory, core courses (12 credit hours) shown in Table I; three elective courses (9 credit hours) drawn from Table II; a compulsory, integrative case study (3 credit hours); a compulsory seminar course (1 credit hour); and compulsory project course (6 credit hours).
2. The compulsory core courses (Table I) introduce students to the four main areas of study in the program: petroleum management, petroleum production, petroleum exploration, and petroleum policy and planning.
3. Electives allow students to specialize in one or more of the four main areas of study. Electives must be chosen from the list in Table II. The Board of Studies may from time to time and following approval add other courses to Table II.
4. The integrative case study will involve all students and a number of instructors from the different disciplines in MOGS. It is intended to integrate the decision-making process in a specific petroleum prospect from play concept, to discovery, to production and finally to product and market. A case study shall be chosen by the instructors of the four compulsory, core courses.
5. The seminar course requires students to research a specific topic in an area of interest and present the results of their research both as an oral and written presentation. Participation in the seminar course is compulsory for all students.
6. The project course will span two semesters. Normally the project course will be conducted as a group exercise to enhance the interdisciplinary nature of the project. At the beginning of the second semester, each team identifies the topic of the project, conducts

the relevant literature survey, writes a proposal, and identifies a mentor or mentors. In the third semester, the team completes the project, and writes the final report. An oral presentation of the final paper is generally required. The mentor(s) provides the team with technical support and guidance.

7. A waiver of a core course may be granted by the Dean of Graduate Studies on the recommendation of the Academic Director if the candidate can demonstrate that the material in the course has been substantially covered by other courses taken at this or another recognized university. In such cases, the course must be replaced by another graduate course offered by Memorial University of Newfoundland. The selection of the replacement course shall be made in consultation with the candidate, and approved by the Dean of Graduate Studies on recommendation of the Academic Director. The maximum number of core courses that can be waived is one and the replacement course must be taken during the candidate's period of enrollment in the program.
8. Each student's program of study must be approved by the Academic Director and the Dean of Graduate Studies.

## 16.6 Evaluation

1. Candidates for the Master of Oil and Gas Studies (MOGS) Degree must obtain a grade of B or better in all program courses.
2. Candidates who receive a grade of less than B in any course will be permitted to remain in the program provided the course is repeated and passed with a grade of B or better. Alternatively, the candidate may, on the recommendation of the Academic Director, and with the approval of the Dean of Graduate Studies, substitute another graduate course. Only one course repetition or substitution will be permitted during the candidate's program after which the candidate shall be required to withdraw from the program.

## 16.7 Courses

The schedule of courses for the MOGS program is as follows:

**Table I - Master of Oil and Gas Studies Schedule of Core Courses**

6201 Strategic Management in the Oil and Gas Industry 6401 Petroleum Production, Processing and Transportation	6601 Petroleum Exploration, Appraisal and Development 6801 Social and Economic Dimensions of Policy and Planning
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**Table II - Master of Oil and Gas Studies Elective Courses**

6001 Occupational Health, Safety and Environment 6002 Environmental Impact Assessment and Management 6003 Risk Analysis in the Oil and Gas Industry 6006 Project Management	6411 Facilities, Feedstock and Products 6412 Designing for and Operating in the Harsh Offshore Environment 6611 Reservoir Characterization and Management 6811 Economics of Petroleum Exploration and Development
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**Table III - Master of Oil and Gas Studies Compulsory Courses**

6005 Graduate Seminar 6008 Integrative Case Study	6099 Project
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## 17 Regulations Governing the Degree of Master of Philosophy and Specific Program Regulations

Programs leading to this degree are offered at present in German Language and Literature, Humanities, and in Sociology.

### 17.1 Qualifications for Admission

1. Admission is limited and competitive. To be considered for admission an applicant shall hold a Bachelor's degree or its equivalent from an institution recognized by the Senate and shall have a knowledge of his or her proposed field of specialization satisfactory to the Department(s) concerned when interdisciplinary study is intended or to the Board of Studies in the case of the program in Humanities, and to the Dean.
2. Preference will normally be given to applicants who hold an appropriate Honours degree either from Memorial University of Newfoundland, or from another university whose Honours degree is of comparable standing. Any other applicant who holds a Bachelor's degree or its equivalent will be considered for admission provided that:
  - a. the applicant's undergraduate record after the first year shows an average of at least grade B in courses in the proposed field of specialization.
  - b. the applicant's overall undergraduate record after the first year shows an average of at least grade B in all courses taken, and
  - c. the Department or Board of Studies satisfies the Dean that the applicant's work exhibits evidence of academic excellence.

Only in exceptional circumstances, and only on the recommendation of the Department or the Board of Studies, will the Dean consider applicants who do not meet the requirements a. and b. Such applicants, however, must meet the requirement c.
3. An applicant may be required to demonstrate a satisfactory knowledge of the proposed field of study in an examination administered by the Department(s), or Board of Studies.
4. Applicants whose mother tongue is not English are reminded that a high degree of literacy in English is required of students at the University. In most cases instruction is in English, and examinations are to be written in English. (Language departments, however, give instruction in the pertinent language and often require examinations to be written in that language. In addition, other departments may permit and even require examinations to be written in a language other than English).
5. An applicant may be required to pass a qualifying examination.

Note: *Some Departments have particular regulations in addition to these, and applicants are advised to turn to the relevant parts of this Calendar and acquaint themselves with both the **General Regulations** and the regulations of the program in which they are interested.*

### 17.2 Program of Study

1. Every candidate shall read at least 30 credit hours in program courses in one subject or in a combination of closely related subjects as recommended by the Department(s) or Board of Studies, and approved by the Dean.

2. A candidate may be required also to take additional credit hours in program courses, which must be recommended by the Department(s) or Board of Studies, and approved by the Dean.
3. Students registered in the program in Humanities will be required to maintain and submit for evaluation a program Journal (See Program of Study, 3. of the Regulations for the Degree of Master of Philosophy in Humanities).
4. No candidate while classified as a part-time student may take more than 6 credit hours in any one semester.
5. No candidate may take more than 9 credit hours in graduate courses in a single semester, nor any credit hours in undergraduate courses at the same time as 9 credit hours in graduate courses; in no case may graduate and undergraduate credit hours combined exceed 12 in any one semester.
6. The course program will culminate in a general comprehensive examination (see **Evaluation - General Comprehensive Examination** below).
7. Every candidate shall be assigned to a tutor recommended by the Department(s) or Board of Studies and approved by the Dean.
8. The Dean may approve an application to transfer from the M.Phil. to the M.A. only when a new integrated program, acceptable to the Dean, is submitted.

### 17.3 Period of Study

The period of study for the Master of Philosophy degree shall not normally exceed three years, during which time the candidate shall spend at least two semesters in full-time attendance as a graduate student at this University.

### 17.4 Evaluation

See also *Evaluation under General Regulations*

1. Students registered in undergraduate courses shall satisfy examination requirements in these courses.
2. The academic requirements for the degree of Master of Philosophy shall be met when the candidate has successfully completed all course requirements of the program and has passed a general examination which consists of both written and oral parts. The Dean, on the recommendation of the Department(s) or Board of Studies, shall determine the times and places for general examinations; and, on the recommendation of the Department(s) or Board of Studies, shall appoint examiners, one of whom shall be from outside the Department(s) concerned. In the M.Phil. in Humanities, a program Journal is also required.

### 17.5 Evaluation - General Comprehensive Examination

1. Each candidate must pass a general comprehensive examination.
2. The examination committee shall be appointed by the Dean on the recommendation of the Department(s) or Board of Studies. The committee shall consist of either three or five members, at least one of whom must come from outside the Department(s) concerned. The candidate shall be informed of the names of the committee well before the examination.
3. The candidate and the tutor will normally agree when the candidate may sit the general comprehensive examination. However, the Department(s) or Board of Studies must accede to the candidate's request to sit a comprehensive examination, except that in no circumstances may a candidate attempt the general comprehensive examination before his or her course program is completed.
4. The schedule for the examination shall be agreed by the candidate, the tutor, and the examining committee, and shall be promulgated by the Dean.
5. The examination shall consist of a written part and an oral part. The time between the written and the oral parts shall normally be from one to four weeks.
6. The oral examination shall be from one to three hours in length, and shall be conducted by the examining committee, and shall be open to the examination committee and to members of the Department(s) or Board of Studies only.
7. A candidate must satisfy the examining committee in both parts of the examination to obtain a pass.
8. The successful completion of the comprehensive examination is the final academic requirement for the Master of Philosophy degree.

### 17.6 Departmental Regulations

Every candidate in a graduate program shall comply with any additional program requirements and with the **General Regulations**.

### 17.7 German

#### Associate Professor and Head of the Department

R. Ilgner

The degrees of Master of Arts and Master of Philosophy are offered in German Language and Literature and may be taken by full-time or part-time study. No graduate work is offered in Russian at this time.

1. In addition to the general requirements, candidates will be expected to have acquired a superior knowledge of the spoken and written language and may, depending on their academic background and field of specialization, be asked to take advanced undergraduate courses.
2. All candidates will complete at least 15 credit hours and a thesis for the M.A. and at least 30 credit hours for the M.Phil., and the entire program of study and research will normally be of two-years' duration.

#### Courses

A selection of the following graduate courses will be offered to meet the requirements of candidates, as far as the resources of the Department will allow:

- 6000 German Civilization I
- 6001 German Civilization II
- 6100 History of the German Language I
- 6101 History of the German Language II
- 6200 Medieval German Literature I
- 6201 Medieval German Literature II
- 6300 German Literature, 1500-1700 I
- 6301 German Literature, 1500-1700 II
- 6400 German Literature of the Enlightenment and Storm and Stress I
- 6401 German Literature of the Enlightenment and Storm and Stress II

6500 German Classicism I  
 6501 German Classicism II  
 6600 German Romanticism I  
 6601 German Romanticism II  
 6700 German Realism I  
 6701 German Realism II  
 6800 German Literature, 1880-1933 I  
 6801 German Literature, 1880-1933 II  
 6900 Contemporary German Literature I  
 6901 Contemporary German Literature II  
 7000 Special Subject or Author I  
 7001 Special Subject or Author II  
 7002-7020 Special Topics in German Studies

## DEUTSCH

### Professor und Vorstand der Abteilung

R. Ilgner

Auf dem Gebiet der Germanistik werden die Grade Master of Arts (Magister Artium) und Master of Philosophy (Magister Philosophiae) geboten. Sie können sowohl von voll- wie auch von halbzweijährig Studierenden erworben werden. Auf dem Gebiet der Slawistik wird z.Zt. kein weiterführendes Studium geboten.

1. Ausser den allgemeinen Zulassungsbestimmungen wird von den Kandidaten überdurchschnittliche Kenntnis des Deutschen in Sprache und Schrift erwartet. Ihrer akademischen Vorbildung und ihrem Fachgebiet entsprechend, kann ihnen eventuell geraten werden, gleichzeitig fortgeschrittene Kurse der Unterstufe zu belegen.
2. Für den Master of Arts sind mindestens 15 Kreditstunden zu absolvieren und eine wissenschaftliche Arbeit in Übereinstimmung mit den allgemeinen Zulassungsbestimmungen einzureichen, für den Master of Philosophy sind mindestens 30 Kreditstunden vorgeschrieben. Das ganze Studienprogramm dauert normalerweise zwei Jahre.

### Kurse

Von den hier aufgeführten Kursen für Graduierte wird jeweils eine Auswahl angeboten, die sowohl den Anforderungen des Studierenden wie den Möglichkeiten der Abteilung gerecht wird.

6000 Deutsche Kulturkunde I  
 6001 Deutsche Kulturkunde II  
 6201 Mittelhochdeutsche Literatur II  
 6501 Deutsche Klassik II  
 7000 Wahlthema oder - Autor I  
 7001 Wahlthema oder - Autor II  
 7002-7020 Wahlthemen in German Studies

## 17.8 Humanities

### Director, Board of Studies

P. Trnka

The Master of Philosophy in Humanities has been designed for students from any discipline. It is directed to students who hold an honours bachelor's degree or its equivalent. The object of the M.Phil. in Humanities program is to provide students with an opportunity to see the historical and logical context of their own disciplinary points of view. The program is based on the interaction of a group of students of varying backgrounds and interests studying a common core of texts in a shared set of courses.

The program draws scholarly participation from faculty members in a range of academic disciplines within the School of Graduate Studies. The program is administered by a Board of Studies with membership appointed by the Dean of Arts, from among the participating faculty.

### Master of Philosophy

See also *General Regulations governing the degree of Master of Philosophy*.

This program is offered by the Faculty of Arts, and will draw scholarly participation from among those appropriately qualified faculty members wishing to participate, regardless of Department or Faculty affiliation.

### 17.8.1 Qualifications for Admission

1. Admission is limited and competitive. The number of students admitted to the program will be strictly limited to ensure small classes and maximum student-faculty contact. To be considered for admission an applicant will normally hold an Honours Bachelor's degree (or equivalent) from an institution recognized by the Senate, and will have a breadth of knowledge in one or more of the Humanities disciplines satisfactory to the Board of Studies, and to the Dean.
2. Applicants who do not hold an Honours degree (or equivalent) will be required to complete, prior to admission, a number of undergraduate courses, the nature and number of which will be determined on the basis of the applicants' undergraduate record by the Director of Studies in consultation with the Board of Studies. Candidates will be required to complete such designated pre-admission courses with a minimum overall average of 70%.

### 17.8.2 Administration

1. The program will be administered by a Board of Studies, the members of which will be appointed by the Dean of Arts from among the participating faculty.
2. There will be a Director of Studies who will be an *ex officio* of the Board of Studies and will make recommendations to the Dean concerning admission, financial support for students, and all other matters pertaining to the program.
3. Responsibility for the allocation of teaching and the support of related research will be managed by agreement between the Deans of the appropriate Faculties, the Heads of Departments of participating faculty members, and the Director of Studies, in consultation with the Dean of Graduate Studies.
4. The Board of Studies will be empowered to secure external grant funding where appropriate, and to manage all related administrative and financial matters as necessary.

### 17.8.3 Program of Study

1. Every candidate shall normally read 30 credit hours in the 10 regulation courses listed below.
2. With permission of the Director of Studies, a candidate may elect to substitute up to two of these courses with courses from other graduate programs in this University. Attendance in other programs requires the permission of the departments involved. (See also School of Graduate Studies General Regulation **Program Requirements, Transfer of Course Credits** which allows for further transfer of credits already taken but not yet applied to a graduate degree.)
3. Every candidate shall be required to maintain and submit a program Journal which will be monitored and evaluated by the Board of Studies. The Journal will comprise the candidate's critical reflections arising out of analyses of designated key themes common to the several disciplines which constitute the program.

### 17.8.4 Comprehensive Examination

1. Each candidate must pass a general comprehensive examination.
2. The Examination Committee shall be appointed by the Dean of Graduate Studies on the recommendation of the Board of Studies. The Committee shall normally consist of three members. One member of the Committee is normally the tutor. The candidate shall be informed of the names of the committee well before the examination.
3. The candidate and the tutor will normally agree when the candidate may sit the general comprehensive examination. However, the Board of Studies must accede to the candidate's request to sit a comprehensive examination, except that in no circumstances may a candidate attempt the general comprehensive examination before his or her course program is completed.
4. The schedule for the examination shall be agreed by the candidate, the tutor, and the Examining Committee, and shall be promulgated by the Dean.
5. The examination shall consist of a written part and an oral part. The time between the written and the oral parts shall normally be from one to four weeks.
6. The program journal is an extended paper or series of linked papers which analyses and reflects critically on issues encountered by the candidate during the course of the program. Papers and/or projects completed during courses may be incorporated into the program journal, but shall not, of themselves, constitute the entire journal.
7. The oral examination shall be from one to three hours in length, shall be conducted by the Examining Committee, and shall be open only to the Examination Committee, members of the Board of Studies and members of the Departments concerned.
8. A candidate must satisfy the Examining Committee in both parts of the examination to obtain a pass.
9. The successful completion of the comprehensive examination is the final academic requirement for the Master of Philosophy degree.

#### Courses

6000 Speaking and Writing I  
 6001 Speaking and Writing II  
 6010 Readings in History I  
 6011 Readings in History II  
 6020 Readings in Western Literature I  
 6021 Readings in Western Literature II  
 6030 Readings in Philosophy I  
 6031 Readings in Philosophy II  
 6040 Readings in Science and Technology  
 6041 Seminar in Humanities

## 17.9 Sociology

#### Professor and Head of the Department

S.H. Riggins

#### Master of Philosophy

1. Minimum admission requirements are a B average in undergraduate studies with a good undergraduate record in Sociology.
2. The Master of Philosophy requires the completion of 30 credit hours including the Graduate Seminar (6880) and Methods (6040). Other courses will be selected in consultation with the chair of the department's graduate studies committee.

#### Courses

A selection of the following graduate courses will be offered to meet the requirements of candidates, as far as the resources of the Department will allow:

6040 Methods of Sociological Research  
 6090-94 Special Area in Sociology  
 6120 Social Organization  
 6130 Social Stratification  
 6140 The Community  
 6150 Social Theory  
 6160 Theory Construction and Explanation in Sociology  
 6240 Sociology in Medicine  
 6280 Social and Economic Development  
 6300 Maritime Sociology  
 6310 Political Sociology  
 6320 Gender and Society  
 6330 Science and Technology  
 6340 Comparative North Atlantic Societies  
 6350 Environmental Sociology  
 6360 Sociology of Work  
 6370 Feminist Theory and Methods  
 6380 Women, Nature, Science and Technology (Cross listed as Women's Studies 6380)  
 6610 Socialization  
 6620 Current Topics in Social Behaviour  
 6880 Sociology Graduate Seminar



## 18 Regulations Governing the Degree of Master of Physical Education

**Director of the School**  
to be determined

The degree of Master of Physical Education is offered by full-time and part-time study.

### 18.1 Qualifications for Admission

- Admission is limited and competitive. To be considered for admission an applicant shall normally hold a Bachelor's Degree in Physical Education, Recreation and Leisure Studies or a related discipline, with at least second class standing, from an institution recognized by Senate. In addition to the above, preference will be given to applicants with work experience, obtained either through Cooperative Education programs or through employment deemed appropriate.
- Any other applicant who holds a Bachelor of Physical Education or Recreation and Leisure Studies degree or its equivalent may be considered for admission provided that:
  - the applicant's undergraduate record after the first year shows an average of at least grade B in physical education and/or recreation and leisure studies courses, OR
  - the applicant has raised his/her overall academic standing to second class following the completion of the undergraduate degree, through the successful completion of an approved pattern of undergraduate courses.
- Only in exceptional circumstances and only on the recommendation of the School of Human Kinetics and Recreation shall the Dean of Graduate Studies consider applicants who do not meet these admission requirements.

### 18.2 Program of Study and Research

- The degree of Master of Physical Education is offered under two options:
 

**Option i.** The program shall consist of a minimum of 15 credit hours in graduate courses plus a thesis. The thesis shall be on an approved subject in which systematic research has been conducted by the candidate under the direction of the Supervisor.

**Option ii.** The program shall consist of a minimum of 24 credit hours in graduate courses plus a comprehensive examination in the candidate's major area of study.
- The candidate's major area of study shall be Administration, Curriculum and Supervision in Physical Education.  
In conjunction and collaboration with other Faculties and Schools of Memorial University of Newfoundland, students may pursue their special interests through an interdisciplinary course of study. The student's interests may be accommodated through individual reading and research in these special areas.
- The required courses for the degree shall normally include as a basic core the courses HKR 6000, 6001, and 6120. Equivalent courses may be substituted from other Faculties or Schools subject to the approval of the School of Human Kinetics and Recreation Graduate Studies Committee.
- The remaining courses shall be chosen in consultation with the student's supervisor subject to approval by the Dean of Graduate Studies.

### 18.3 Evaluation

- Candidates must obtain an A or B grade in each program course. In accordance with General Regulation **Evaluation, Evaluation of Graduate Students** only one course may be repeated.
- When the Director has determined, on the basis of consultation with the candidate and the instructors, that a candidate's work has fallen below a satisfactory level, he or she may recommend to the Dean of Graduate Studies that the candidate be required to withdraw from the program.

### 18.4 Thesis Report

- Evaluation of the thesis shall be governed by Graduate Studies General Regulation **Theses and Reports**. The thesis shall normally be evaluated by two examiners approved by the Dean.
- When the thesis, has been completed to the satisfaction of the Dean, the Dean shall recommend that the candidate be awarded the degree.

### 18.5 Comprehensive Examinations

- Candidates electing to qualify for the degree under Option ii. must write a comprehensive examination. The comprehensive examination shall examine the candidate's ability to relate the area of specialization to the area of the core studies. The candidate may be required to appear for an oral examination.
- The comprehensive examination shall normally be constructed and evaluated by an examining committee of three examiners, at least two of whom shall be faculty members of the School of Human Kinetics and Recreation appointed by the Dean on the recommendation of the Director of the School.
- A candidate may not write the examination before completing the course work for the degree.

Note: *Every candidate in graduate studies shall comply with the **General Regulations**, the degree regulations and any additional requirements of the Department.*

#### Courses

6000 Quantitative Methods in Physical Education  
 6001 Qualitative Research Methods in Physical Education  
 6002 Scientific and Cultural Foundations of Physical Education  
 6110 Physical Education, Recreation and Sport Management  
 6111 Canadian Delivery Systems in Physical Education, Recreation and Sport  
 6120 Curriculum Development in Physical Education  
 6130 Computer Applications in Physical Education  
 6410 Sport and Society  
 6420 History of Physical Education and Sport  
 6XXX Contemporary Issues and Trends in Physical Education

## 19 Regulations Governing the Degree of Master of Science and Specific Program Regulations

### Professor and Dean

C.R. Lucas

### Professor and Associate Dean (Research)

D. Schneider

Tuition leading to this degree is offered at present in Aquaculture, Biochemistry, Biology, Chemistry, Cognitive and Behavioural Ecology, Computational Science, Computational Science (Co-operative), Computer Science, Earth Sciences (Geology), Earth Sciences (Geophysics), Environmental Science, Experimental Psychology, Food Science, Geography, Instrumental Analysis, Marine Biology, Mathematics, Physical Oceanography, Physics, Statistics. Interdisciplinary studies are encouraged; applicants should consult the academic unit concerned.

### 19.1 Qualifications for Admission

- Admission is limited and competitive. To be considered for admission an applicant will normally hold at least a high second class Honours degree, or an M.D. degree, or the equivalent of either, both in achievement and depth of study, from an institution recognized by the Senate, and shall have knowledge of the proposed field of specialization satisfactory to the Dean.
- Any other applicant may be considered for admission provided that:
  - the applicant's undergraduate record after the first year shows an average of at least Grade B in courses in the proposed field of specialization.
  - the applicant's overall undergraduate record after the first year shows an average of at least Grade B in all courses taken.

In addition, an applicant may be required to demonstrate a satisfactory knowledge of the proposed field of study in an examination administered by the academic unit concerned.
- Only in exceptional circumstances, and only on the recommendation of the academic unit concerned, will the Dean consider applicants who do not meet these requirements of Clause 2.
- Applicants who do not possess the prerequisite academic qualifications should consult the appropriate academic unit about a program of further undergraduate courses. Such a program will be intended to raise their qualifications to a level considered academically equivalent to Honours. Such courses may not be used to fulfill the regulation course requirements of the M.Sc. degree.
- A high degree of literacy in English is required of all graduate students in the University.

Note: *Some Departments have specific regulations in addition to those outlined above, and prospective applicants are advised to turn to the relevant part of this Calendar and acquaint themselves with the regulations of the Department or appropriate academic unit in which they are interested.*

### 19.2 Program of Study and Research

- The program of study for the Master of Science degree shall consist of the successful completion of a program of courses and, in accordance with the specific program regulations, either of a thesis embodying original research or of a project and report.
- Every candidate shall read at least 6 credit hours in graduate program courses in one subject or in closely related subjects, and such other courses as may be required in an individual program. Undergraduate courses may, if necessary, be included as additional courses.
- Where departmental regulations require more than the minimum number of credit hours, the Dean, on the recommendation of the appropriate academic unit, may waive in part the credit hour requirements for a Master's degree, provided that no student may take less than the 6 required credit hours in graduate program courses.
- Students may, with the approval of the Dean, augment their studies with 6 credit hours in other courses of their choice. The grading system in non-program courses shall be that appropriate to the particular course, and the final grades in these courses will be recorded on the student's transcripts. However, passing grades are not required in these non-program courses in order to continue in graduate studies or obtain a Master's degree. (See General Regulation **Evaluation, Evaluation of Graduate Students**).
- Every candidate shall submit a thesis or report on an approved subject in which systematic research has been conducted under the direction of a Supervisor recommended by the academic unit concerned and approved by the Dean. The candidate may be required to take an oral examination.
- The program of courses, the thesis or report topic and the Supervisor, and all changes in these, must be approved by the Dean.

### 19.3 Evaluation

- In order to continue in the School of Graduate Studies and in order to qualify for a Master's degree, a candidate shall obtain an A or B grade in each program course. (See General Regulation **Evaluation, Evaluation of Graduate Students**).
- When it has been determined, on the basis of consultation with the candidate, the instructors in graduate courses, and the thesis or report Supervisor, that a candidate's work has fallen below a satisfactory level, the Supervisor or the Head of the appropriate academic unit may recommend to the Dean that such a candidate be required to withdraw from the program.

### 19.4 Thesis

See General Regulation Theses and Reports

Note: *Every candidate in graduate studies shall comply with the General Regulations, the degree regulations and any additional requirements of the appropriate academic unit.*

### 19.5 Aquaculture

#### Administrative Committee

C. Couturier, Fisheries and Marine Institute - Chair

K. Gamperl, Ocean Sciences Centre

L. Halfyard, Fisheries and Marine Institute

C. Parrish, Ocean Sciences Centre

F. Shahidi, Department of Biochemistry

The program of study leading to the Master of Science in Aquaculture is designed to instruct students in research using scientific principles derived from a wide range of disciplines including Biology, Biochemistry and Food Science. Research problems may involve field and laboratory studies on various marine and freshwater flora and fauna. The Aquaculture group consists of faculty members from the Fisheries and Marine Institute of Memorial University of Newfoundland, the Ocean Sciences Centre (OSC), and the Departments of Biology and Biochemistry of Memorial University of Newfoundland.

The Aquaculture Administrative Committee is responsible for the program. This Committee is composed of five appointed members, two from the OSC, two from the Fisheries and Marine Institute of Memorial University of Newfoundland, and one member from an appropriate academic unit at Memorial University of Newfoundland. In addition, the Heads of the Departments of Biochemistry and Biology, the Director of the OSC and the Head of the School of Fisheries of the Fisheries and Marine Institute of Memorial University of Newfoundland are *ex-officio* members. The Committee is appointed by the Dean of Graduate Studies on the recommendation of the appropriate Heads and Directors. The Committee makes recommendations to the Dean of the School of Graduate Studies concerning the academic requirements of the program: admission, course programs of individual students, financial support, composition of supervisory committees, and theses examiners. The Chair of the Committee will also ensure that a supervisory report form for each student in the program is submitted annually to the Dean.

### 19.5.1 Qualifications for Admission

To be considered for admission to the Master of Science in Aquaculture, an applicant shall normally hold one of the following: at least a second class Honours degree, or an equivalent both in achievement and depth of study, from an institution recognized by the Senate, or successful completion of the Diploma in Aquaculture offered by the Fisheries and Marine Institute of Memorial University of Newfoundland, with academic standing deemed appropriate by the Committee.

### 19.5.2 Program of Study

1. The Master of Science degree requires the successful completion of a program of courses and of a thesis embodying original research.
2. All candidates will be required to take 6 credit hours in graduate courses which will normally be Aquaculture 6000 - Shellfish Culture and Enhancement, and Aquaculture 6100 - Finfish Aquaculture.
3. Candidates who do not hold the Diploma in Aquaculture will be required to complete successfully a selection of its component courses.
4. Further courses may be required depending on the background of the individual student.
5. Once in the program, M.Sc. students must achieve a minimum grade of 65% in all required courses.
6. Before the thesis is submitted, the student shall present an open seminar on the topic of investigation to the appropriate academic units, as recommended by the Administrative Committee. Any serious deficiencies in the thesis noticed at this stage should be carefully considered, in consultation with the supervisor, for rectification.
7. The student will be required to comply with all other regulations governing the graduate degree of Master of Science.

#### Courses

6000 Shellfish Culture and Enhancement

6100 Finfish Aquaculture

6200 Aquaculture and the Environment

6201-6209 Special Topics in Aquaculture (Prerequisite: Permission of Chair of Program)

Note: Consult the Program for a list of titles and information regarding availability.

## 19.6 Biochemistry

#### Professor and Head

M. Mulligan

1. The degree of Master of Science is offered in Biochemistry or Food Science to full-time and part-time students.
2. The admission requirements for the graduate programs in Biochemistry and Food Science are as given under General Regulations governing M.Sc. degrees. Depending on the background and/or area of specialization, a candidate's program may include additional courses taken for credit in Biochemistry, Food Science or related subjects.
3. The program of a candidate for the M.Sc. degree shall be the responsibility of the supervisory committee, composed of the Supervisor and at least two other faculty members recommended with the concurrence of the Supervisor by the Head of the department or delegate.
4. It is the responsibility of the student to arrange regular meetings with their supervisory committee. An annual report, prepared by the Supervisor and signed by all members of the supervisory committee, is required to be given to the Head of the department or delegate.
5. All graduate students are expected to attend and participate in the departmental seminars.
6. A student completing an M.Sc. degree will be required to present a seminar on his/her research area. The seminar will normally take place during the last semester of the student's program.

Any deficiencies noted during the seminar should be carefully considered by the student and the supervisory committee prior to submission of the thesis for final examination.

#### Courses

A series of advanced courses in the areas outlined below will be offered. Normally only one course will be offered per semester.

6200 Current Biochemical Research Topics I

6210 Current Biochemical Research Topics II

6400 Control of Intermediary Metabolism

6410 Molecular Endocrinology

6420 DNA: The Structure and Function of Genes (Prerequisite: An introductory course in molecular biology, or its equivalent, at the senior undergraduate level, e.g. Biochemistry 4100)

6421 RNA: Structure, Function and Synthesis (Prerequisite: An introductory course in molecular biology, or its equivalent, at the senior undergraduate level, e.g. Biochemistry 4100)

6422 Regulation of Protein Synthesis (Prerequisite: An introductory course in molecular biology, or its equivalent, at the senior undergraduate level, e.g. Biochemistry 4100)

6430 Bioenergetics  
 6440 Membranes  
 6450 Proteins  
 6500 Enzymology  
 6520 Nutritional Biochemistry  
 6530 Food Biochemistry  
 6590 Molecular Biology I (*Cross listed as Biology 6590 and Medicine 6590*), Prerequisites: Biology 4241, Biochemistry 4100 (or equivalent)  
 6591 Molecular Biology II (*Cross listed as Biology 6591 and Medicine 6591*) Prerequisites: Biology 4241, Biochemistry 4100 (or equivalent)  
 6592 Bacterial Genetics (*Cross listed as Biology 6592*) Prerequisite: Biology 4241 or Biochemistry 4100 (or equivalent)  
 6593 Selected Readings in Molecular Biology (*Cross listed as Biology 6593*), Prerequisites or Co-requisites: Biology 6590, 6591/  
 Biochemistry 6590, 6591/Medicine 6590, 6591 (or equivalent)  
 6600 Metabolic Toxicology  
 6610 Comparative Biochemistry  
 6620 Biochemical Adaptation  
 6630 Marine Biochemistry  
 6640 Biochemistry of Cancer  
 6650 Science and Technology of Seafoods  
 6660 Industrial Microbiology  
 6670 Biological Waste Treatment  
 6680 Processing and Quality of Foods

## 19.7 Biology

### Professor and Interim Head

M. Colbo

The degree of Master of Science is offered in Biology and Marine Biology to full-time and part-time students. Students interested in animal behaviour should also consult the section in the Calendar describing the Master of Science in Cognitive and Behavioural Ecology program. In addition, a Master of Science degree is offered in Aquaculture. See appropriate sections of this Calendar.

### 19.7.1 Biology

1. The program of a candidate shall be the responsibility of a Supervisory Committee composed of the Supervisor and at least two other appropriate members recommended to the Dean by the Head (or delegate) of the Department with the concurrence of the Supervisor.
2. The Supervisory Committee shall interview the student normally within a month of first registration, to discuss the student's program and to explore any areas of weakness in the candidate's biological knowledge, especially where these relate to the intended areas of research.
3. A student will be required to take a minimum of 6 credit hours.
4. It is the function of a Supervisory Committee to have regular meetings, at least annually, with its graduate student. A meeting report, signed by all members of the Supervisory Committee and student, must be given to the Department. A copy will be sent to the graduate student and to the Dean of Graduate Studies.
5. The candidate will present a tentative outline of the proposed research to the Supervisory Committee, with a copy to the Department by the end of the second semester, and preferably prior to commencement of the research.
6. The student will present a research seminar to the Department, normally by the end of the second semester following admission, to describe the research topic being investigated and the methodologies to be employed. This seminar provides an opportunity for the student to receive constructive input from the broad biological community.
7. The candidate must present a thesis seminar of 30-40 minutes duration to the Department prior to submission of the thesis to the School of Graduate Studies. The candidate will be questioned by a panel approved by the Departmental Graduate Studies Committee, in consultation with the student's Supervisory Committee. All others in attendance will be invited to question the candidate before adjournment. Deficiencies noted at this stage should be carefully considered by the student and the Supervisory Committee prior to submission of the thesis for final examination.  
 Under exceptional circumstances, this requirement may be waived by the Head of the Department (or delegate).
8. Each Master's candidate shall spend at least one semester in residence as a full-time student within the Department during the program. It is recommended that this semester be at the beginning of the program.  
 Under exceptional circumstances, this requirement may be waived by the Head of the Department (or delegate).
9. If candidates, in the opinion of the Supervisor, Committee and Department, are not making satisfactory progress, they will be required to withdraw from the program.
10. Theses shall conform to **Theses and Reports** of the **General Regulations** of the School of Graduate Studies and to the regulations in the Departmental Guidelines.

### 19.7.2 Marine Biology

1. A program of study leading to a degree of Master of Science with a specialization in Marine Biology is governed by the above regulations.
2. Students will be required to take graduate courses comprising a minimum of 12 credit hours. These 12 credit hours must include Biological Oceanography 7531, and at least two of 6710, 7535, 7540, 7541, 7551, 7560, and 7561. The remaining credit hours may be selected from any other Biology graduate courses or relevant graduate courses in other Departments.

#### Courses

A selection of the following graduate courses will be offered to meet the requirements of candidates, as far as the resources of the Department will allow:

6000 Research Topics in Microbiology  
 6100 Modern Problems in Botany  
 6110 Advanced Phycology  
 6120 Mycology

6350 Behavioural Ontogeny (*Cross-listed as Psychology 6350*)  
 6351 Behavioural Ecology and Sociobiology (*Cross-listed as Psychology 6351*)  
 6355 Field Course in Animal Behaviour (*Cross-listed as Psychology 6355*)  
 6400 Parasitic Protozoology  
 6410 Helminthology  
 6420 Parasitic Arthropods  
 6590 Molecular Biology I (*Cross-listed as Biochemistry 6590 and Medicine 6590*) Prerequisites: Biology 4241, Biochemistry 4100 (or equivalent)  
 6591 Molecular Biology II (*Cross-listed as Biochemistry 6591 and Medicine 6591*) Prerequisites: Biology 4241, Biochemistry 4100 (or equivalent)  
 6592 Bacterial Genetics (*Cross-listed as Biochemistry 6592*) Prerequisite: Biology 4241 or Biochemistry 4100 (or equivalent)  
 6593 Selected Readings in Molecular Biology (*Cross-listed as Biochemistry 6593*) Prerequisites or Co-requisites: Biology 6590, 6591/ Biochemistry 6590, 6591/Medicine 6590, 6591, (or equivalent)  
 6700 Biology of the Molluscs  
 6710 Marine Benthic Biology  
 6900 Entomology  
 6910 Applied Entomology  
 7110 Cellular Physiology and Cytology  
 7140 Physiology of Parasitism  
 7210 Arctic and Subarctic Biology  
 7220 Quantitative Methods in Biology  
 7250 Topics in Wildlife Biology  
 7270 Ecology of Newfoundland  
 7300 Ornithology  
 7520 Advances in Fish Biology  
 7530 The Molecular Basis of Development  
 7531 Biological Oceanography  
 7535 Research Methods in Marine Science  
 7540 Plankton Dynamics  
 7541 Physiological Ecology of Phytoplankton  
 7550 Fishery Biology  
 7551 Fisheries Resource Management  
 7560 Physiology of Marine Vertebrates  
 7561 Physiology of Marine Vertebrates  
 7570 Marine Benthic Biology  
 7600 Effect of Organic and Inorganic Pollutants on Biological Systems  
 7910 Community and Ecosystem Ecology  
 7920-7940 Special Topics in Biology

## 19.8 Chemistry

### Associate Professor and Head of the Department

R. Davis

- The degree of Master of Science in Chemistry is offered as full-time or part-time study.
  - Preference for admission will be given to students with a B.Sc. (honours) degree in Chemistry from a recognized university.
  - Students holding a B.Sc. degree in Chemistry from a university of recognized standing with a minimum overall average of 65% and minimum average of 65% in all Chemistry courses taken after the first year will be considered for admission to the Chemistry M.Sc. program. Students not admissible under 1.a. may, on the advice of the Supervisory Committee, be required to pass qualifying exams and/or supplementary undergraduate courses with a minimum B grade.
  - Students with a first class B.Sc. in an area other than Chemistry will also be considered for admission. Students not acceptable under 1.a. or 1.b. who have a strong background in an appropriate area of specialization may, on the advice of the Supervisory Committee, be required to pass qualifying exams and/or supplementary undergraduate courses with a minimum B grade.
  - Candidates are normally required to write American Chemical Society (ACS) placement test(s) in the first two weeks of the initial semester of registration in order to determine an appropriate course program.
- Candidates will be assigned a Supervisory Committee consisting of the Supervisor and at least two other appropriate faculty members appointed by the Dean on the recommendation of the Chemistry Deputy Head (Graduate Studies).
- The program of a candidate must be arranged by the Supervisor before the second semester of registration in consultation with the Supervisory Committee and the student. It is the responsibility of the Supervisory Committee to meet at least annually with the student, to provide guidance at all stages of the candidate's program, and, in consultation with the student, to prepare written annual progress reports for submission to the Dean of Graduate Studies.
- Candidates are normally required to successfully complete Chemistry 6001 (Master's Seminar) and a minimum of 6 credit hours of graduate Chemistry courses with a minimum B grade. Additional program courses may be assigned by the Supervisory Committee.
- Candidates are required to attend Departmental seminars.
- Candidates must submit a thesis deemed acceptable to two examiners as described in the M.Sc. general regulations. An oral defence is not required.

### Courses

6001 Master's Seminar  
 6004 Project Seminar  
 6110 Analytical Chemistry II  
 6150 Advanced Spectroscopic Techniques  
 6151 Analytical Separations and Organic Mass Spectrometry  
 6152 Electroanalytical Techniques  
 6153 Techniques in Sampling, Trace Analysis and Chemometrics  
 6154 Business Management and Good Laboratory Practice  
 6155 Computers in Instrumental Analysis and Basic Electronics (Same as Med 6070)  
 6160 Laboratory Projects in Sampling, Electroanalysis and Trace Analysis  
 6161 Laboratory Projects in Analytical Separations and Spectroscopic Techniques

6190-9 Selected Topics in Analytical Chemistry  
 6201 Bioinorganic Chemistry  
 6202 Main Group Chemistry  
 6204 Mechanisms in Catalysis  
 6205 Photochemistry of Transition Metal Complexes  
 6210 Organometallic Chemistry  
 6290-9 Selected Topics in Inorganic Chemistry  
 6300 Quantum Chemistry I  
 6301 Quantum Chemistry II  
 6302 Molecular Spectroscopy  
 6310 Electronic Structure Theory  
 6323 Chemical Thermodynamics I  
 6324 Chemical Thermodynamics II  
 6350 Electrochemical Kinetics  
 6360 Solid State Chemistry  
 6380 Adsorption on Surfaces  
 6390-9 Selected Topics in Physical Chemistry  
 6401 Organic Spectroscopic Analysis I  
 6402 Organic Spectroscopic Analysis II  
 6421 Natural Products Chemistry  
 6460 Organic Synthesis  
 6470 Physical Organic Chemistry  
 6490-9 Selected Topics in Organic Chemistry  
 6600 Applications of Inorganic and Organometallic Chemistry to Toxicology

### 19.8.1 Instrumental Analysis

#### 1. Program of Study

- The Department of Chemistry in collaboration with other faculty in Science offers a course-based program in instrumental analysis leading to the degree of Master of Science. The program is available on a full-time or part time basis and will normally require four semesters of study. The program is designed for students who wish to pursue career opportunities in all areas of applied science which require in-depth knowledge and laboratory expertise in analytical instrumentation.
- The program will be administered by a Program Committee consisting of the Deputy Head (Graduate Studies) who will be chair, the Program Coordinator (Chemistry) and a third faculty member from another science department. The Program Committee will be responsible for overseeing that a level of standards be maintained.
- The Program Coordinator will be responsible for coordinating the course offerings and for soliciting student projects for the program to be approved by the Program Committee.

#### 2. Qualifications For Admission

Admission is limited and competitive. To be considered for admission, applicants shall normally hold a Bachelor's degree in Science (with at least a minor in Chemistry, and having completed Chemistry 4100 or equivalent) with at least a second class standing from an institution recognized by the Senate. The Program Committee will make recommendations on admission to the Dean of Graduate Studies.

#### 3. Program Requirements

- All programs must be approved by the Program Committee and by the Dean of Graduate Studies. All **General Regulations** of the School of Graduate Studies shall apply to this degree.
- The program requires the completion of the 24 credit hours representing the eight required program courses, one project seminar, and a project report. Normally, completion of the program will require four semesters of study.
- A project seminar will be given to the Department of Chemistry at the end of the student's program.
- Students will be required to complete a research project, the scope of which will normally require no more than two semesters of full-time effort. The Project Report shall be evaluated according to the procedures outlined in **Theses and Reports**.

#### 4. Required Courses

6004 Project Seminar  
 6150 Advanced Spectroscopic Techniques  
 6151 Analytical Separations and Organic Mass Spectrometry  
 6152 Electroanalytical Techniques  
 6153 Techniques in Sampling, Trace Analysis and Chemometrics  
 6154 Business Management and Good Laboratory Practice  
 6155 Computers in Instrumental Analysis and Basic Electronics (Same as Medicine 6070)  
 6160 Laboratory Projects in Sampling, Electroanalysis and Trace Analysis  
 6161 Laboratory Projects in Analytical Separations and Spectroscopic Techniques

## 19.9 Cognitive and Behavioural Ecology Program

### Administrative Committee

Dr. Rita Anderson (Psychology)  
 Dr. Edward Miller (Biology)  
 Dr. William Montevecchi (Psychology)  
 Dr. Paul Snelgrove (Biology)  
 Dr. Anne Storey (Psychology) - Chair  
 Dr. Ian Warkentin or Dr. David Brombeck (Grenfell College)  
 One Graduate Student from the Program

- The Cognitive and Behavioural Ecology Program is interdisciplinary and designed to train students in research that integrates cognitive and behavioural studies at the ecological level. Molecular, developmental and evolutionary aspects of cognition and behaviour are also studies. Supervisors include faculty from the Departments of Biology, Psychology, and the Ocean Sciences Centre, the Faculty of Medicine, and the Environmental Science Program at Sir Wilfred Grenfell College, as well as adjunct faculty from the Canadian Wildlife Service, Department of Fisheries and Oceans, the Newfoundland and Labrador Forestry and Wildlife Divisions and Parks Canada. The Departments of Biology and Psychology jointly offer the Master of Science and the Doctor of

Philosophy degrees in Cognitive and Behavioural Ecology.

2. The Administrative Committee is responsible for the Program. Committee members are appointed by the Dean of Science, on the recommendation of the Chair of the Committee and of the Heads of Biology and Psychology. The Committee Chair is elected by the committee members and appointed by the Dean of Science. The Committee makes recommendations to the Dean of Graduate Studies concerning admissions and academic requirements. In consultation with supervisors, recommendations are made concerning course programs, financial support, thesis committees, comprehensive and thesis topics and examiners, students' annual progress. Upon program completion, the Committee certifies that all requirements for the appropriate degree have been met. The department of the supervisor ensures that adequate facilities are provided for each candidate. Students in the Cognitive and Behavioural Ecology Program are considered for teaching assistantships in the Psychology or Biology Departments.

### 19.9.1 Master of Science

1. Students normally take four courses (12 credit hours) in the first year. Students will be required to take Quantitative Methods in Biology (BIOL 7220) or Advanced Statistics in Psychology (6000) unless they have already passed an equivalent graduate or Honours course, Behavioural Ecology and Sociobiology (BIOP 6351), Field Course in Animal Behaviour (BIOP 7000) and one elective, in consultation with the Supervisor.
2. Upon completion but before submission of the thesis, the student is required to give a formal thesis presentation.
3. The student will be required to comply with all other regulations governing the graduate degree of Master of Science.

#### Courses

Biology 7220 Quantitative Methods in Biology  
 Biopsychology 6240 Special Topics  
 Biopsychology 6350 Behavioural Ontogeny  
 Biopsychology 6351 Behavioural Ecology and Sociobiology  
 Biopsychology 7000 Field and Lab Methods in Animal Behaviour and Behavioural Ecology  
 Psychology 6000 Advanced Statistics in Psychology

## 19.10 Computational Science Program

### Professor and Program Chair

G. Miminis

### 19.10.1 Administrative Committee

The Administrative Committee, appointed by the Dean of the School of Graduate Studies on the recommendation of the Dean of the Faculty of Science, consists of at least one representative of each participating academic unit, and one member external to the University.

### 19.10.2 Participating Departments and Organizations

This interdisciplinary program offers the Master of Science degree in both Computational Science and Computational Science (Co-operative). The departments of Chemistry, Computer Science, Earth Sciences, Mathematics and Statistics, Physics and Physical Oceanography and the Faculty of Engineering and Applied Science are participants in this program. Other departments and faculties may be involved, depending on the nature of the thesis or project. External organizations may provide placements for co-op students, jointly supervise students, share computing resources and participants in teaching courses.

### 19.10.3 Admission Criteria and Procedures

1. The criteria for acceptance of an applicant are: his or her anticipated successful and timely completion of the program, and the willingness of a participating faculty member to supervise the applicant.
2. The assessment of an applicant's likelihood of success will be carried out in a variety of ways. Students will normally hold a B.Sc. (Honours) degree, or equivalent, with a strong computational orientation. A general B.Sc. Degree, complemented by relevant experience, may also be acceptable. At the time of application, the student will be invited to demonstrate his or her background in the field. For example, the successful completion of a suitable B.Sc. which included a number of computer science courses or an undergraduate B.Sc. thesis which involved scientific computing would generally be acceptable, as would work experience which involved computing in a scientific environment.
3. Admission decisions will be made by the School of Graduate Studies on the recommendation of the chair of the Administrative Committee.

### 19.10.4 Program of Study

1. The Computational Science Program is designed to train students in the state-of-the-art numerical methods, high performance computer architectures, use of software development tools for parallel and vector computers, use of graphics and multimedia tools and application of these techniques to at least one scientific or engineering discipline.
2. The Program is offered in thesis and project (non-thesis) versions, with the option of a co-operative education program. It is intended that the overall level of student effort and performance required in each version will be comparable.
3. The work for the thesis or project will be carried out under the guidance of a supervisory committee appointed by the Dean of the School of Graduate Studies on the recommendation of the Administrative Committee. Before submission of the thesis or project report to the School of Graduate Studies for examination, each student must present a seminar suitable for an interdisciplinary audience.
4. All student programs will contain a core of 9 credit hours in prescribed graduate courses. Additional courses, in an area of scientific specialization must also be completed. The course requirements for each student will be approved by the Administrative Committee on the recommendation of the student's supervisory committee, and will reflect the interdisciplinary nature of the program.
  - a. The three core courses are: Computational Science 6910, Matrix Computations and Applications; Computational Science 6930, Numerical Linear Algebra for High-Performance Computers; Mathematics 6210, Numerical Solution of Differential Equations. The other courses will normally be taken from the list of approved courses.
  - b. The thesis version requires the completion of 15 credit hours in graduate courses numbered 6000 or higher including 9 credit hours in prescribed core courses, and the submission of an acceptable thesis to the School of Graduate Studies for final examination. The thesis is to contain an original scholarly contribution. The two additional courses will normally be chosen from the list of approved courses and be in the same field as the thesis work.

- c. The project version requires the completion of 24 credit hours in graduate courses, including 9 credit hours in prescribed core courses, plus a project and an acceptable project report which must be submitted to the School of Graduate Studies for final examination. At least 9 credit hours of the additional 15 credit hours will normally be chosen from the list of approved courses. Nine of the 15 additional credit hours will normally be in the same field as the project. The project, which will include an in-depth written report, shall require the equivalent of at least one and no more than two semesters of full time work.

### 19.10.5 Co-operative Education Option

1. A co-operative education option will be available. Students in this option may follow the thesis or non-thesis version of the program. It is expected to take up to 24 months to complete. Students will be asked to indicate if they wish to follow this option at the time of application.
2. Students who are accepted into the M.Sc. program may be provisionally accepted into the co-op option. During their first two semesters, such students will interview with the Co-operative Education Services Centre and with prospective work term employers. Satisfactory performance in this phase of the program will lead to confirmation of acceptance into the co-op option, and allow the student to spend two of the next three terms working in industrial or government settings. Upon completion of each work term, the student must submit an acceptable work report.
3. Following the completion of the two work terms, each student must complete any remaining course requirements and project report or thesis. Assuming that prior written authorization of the employer and the supervisory committee was obtained and submitted to the School of Graduate Studies, students may include material from the work terms in their reports or theses. For students following the non-thesis version of the program, the two work-term reports may be combined into a single, integrated report for this purpose. All other students must write a thesis on a research project which may be based on research completed during the work terms.
4. Students who are accepted into the co-op option are not guaranteed placements. In the event that a student fails to obtain two semesters of placements, but successfully completes all other requirements of the degree, he or she will still be eligible for graduation, but without the designation of a co-op degree.

#### Courses

The core courses are:

Computational Science 6910. Matrix Computations and Applications  
 Computational Science 6930. Numerical Linear Algebra for High-Performance Computers  
 Mathematics 6210. Numerical Solution of Differential Equations

The following courses are identified as suitable for students in this program. Other courses may be permitted.

#### Department of Chemistry

6301 Quantum Chemistry II  
 6310 Electronic Structure Theory

#### Computational Science

601W Work Term 1  
 602W Work Term 2  
 6900-6909 Special Topics  
 6910 Matrix Computations and Applications  
 6920 Scientific Programming  
 6930 Numerical Linear Algebra for High-Performance Computers

#### Department of Computer Science

6713 Software Engineering  
 6722 Advanced Computer Architectures  
 6729 Special Topics in Computer Systems - Computer Networks  
 6731 Topics in Numerical Methods  
 6738-39 Special Topics in Numerical Methods  
 6752 Applications of Computer Graphics  
 6756 Digital Image Processing

#### Department of Earth Sciences

6994 Special Topics in Earth Sciences - Geophysical Inversion and Applications  
 6171 Advanced Exploration Seismology

#### Department of Mathematics and Statistics

6102-6109 Special Topics in Applied Mathematics  
 6201 Numerical Methods for Partial Differential Equations  
 6210 Numerical Solution of Differential Equations (required course for Computational Science)  
 6212 Numerical Methods for Initial Value Problems  
 6588 Selected Topics in Statistics and Probability - Generalized Additive Models with Applications in Scientific Visualization

#### Department of Physics and Physical Oceanography

6000 Condensed Matter Physics I  
 6200 Nonlinear Dynamics  
 6308 Ocean Dynamics I  
 6309 Ocean Dynamics II  
 6310 Physical Oceanography  
 6316 Ocean Measurements and Data Analysis  
 6317 Ocean Acoustics  
 6318 Numerical Modeling  
 6320 Turbulence  
 6321 Coastal Oceanography  
 6323 Stability Theory  
 6400 Statistical Mechanics  
 6850 Quantum Mechanics I

#### Faculty of Engineering and Applied Science

9015 Ocean Engineering Hydrodynamics  
 9052 Ice Properties and Mechanics  
 9501 Finite Element Analysis  
 9713 Stochastic Hydrology



9815 Electromagnetic Propagation  
 9821 Digital Signal Processing  
 9826 Advanced Control Systems  
 9861 High-Performance Computer Architecture  
 9865 Advanced Digital Systems  
 9869 Advanced Concurrent Programming  
 9871 Information Theory and Coding

## 19.11 Computer Science

### Professor and Head of the Department

W. Banzhaf

The degrees of Master of Science and Doctor of Philosophy are offered in Computer Science.

### 19.11.1 Master of Science

1. Each candidate admitted into the program shall hold an Honours degree or equivalent in Computer Science or a closely related discipline. An applicant whose undergraduate degree was not in Computer Science, but who has obtained some academic standing in Computer Science, may be recommended for admission to the M.Sc. program and in addition, will be required to take a prescribed set of undergraduate Computer Science courses which may be taken in parallel with the regulation graduate courses. International applicants are strongly encouraged to submit results of the (general) Graduate Record Examination (GRE) Test.
2. Candidates are required to complete a minimum of 15 credit hours in graduate program courses. A candidate may take 3 credit hours in courses offered by another academic unit as one of the courses.
3. Each candidate is required to submit an acceptable thesis. The thesis project may involve a theoretical investigation and/or the development of an original, practical system. Each candidate is required to present a tentative outline of his/her proposed research to the Supervisor, with a copy to the Department Committee on Graduate Studies, by the end of his/her third semester in the program (sixth semester for part-time students).
4. Prior to submission of a thesis, normally in the last semester of the program, candidates are required to present a seminar on the thesis topic, methods employed and research results.
5. All candidates are expected to take an active part in seminars and other aspects of the academic life of the Department of Computer Science.

### Courses

A selection of the following graduate courses will be offered to meet the requirements of candidates, as far as the resources of the Department will allow:

#### Programming Languages

6711 Syntax and Semantics of Programming Languages  
 6712 Compiling Techniques  
 6713 Software Engineering  
 6714 Functional Programming  
 6715 Logic Programming  
 6716 Concurrent Programming  
 6718-6719 Special Topics in Programming Languages

#### Computer Systems

6720 Distributed and Parallel Computing  
 6721 Operating Systems Design  
 6722 Advanced Computer Architectures  
 6723 Microprocessor Systems  
 6724 VLSI Design (same as Engineering 9863)  
 6725 Computational Aspects of VLSI (same as Engineering 9864)  
 6726 Modelling and Analysis of Computing Systems  
 6727 Introduction to High Performance Computer Systems  
 6728-6729 Special Topics in Computer Systems - Computer Networks

#### Numerical Computations

6731 Topics in Numerical Methods  
 6732 Matrix Computations  
 6738-6739 Special Topics in Numerical Methods

#### Theoretical Aspects

6741 Advanced Automata Theory  
 6742 Theory of Databases  
 6743 Complexity of Computational Problems  
 6745 Special Topics - Advanced Computational Geometry  
 6748-6749 Special Topics in Theoretical Computer Science

#### Applications

6751 Database Technology and Information Retrieval  
 6752 Applications of Computer Graphics  
 6753 Artificial Intelligence  
 6754 Post-Genomic Computational Biology  
 6755 Knowledge-Based Systems  
 6756 Digital Image Processing  
 6758-6769 Special Topics in Computer Applications  
 6770-6790 Special Topics in Computer Science

## 19.12 Earth Sciences

### Head of the Department

J. H. Hanchar

The degrees of Master of Science and Doctor of Philosophy are offered in Earth Sciences (Geology) and Earth Sciences (Geophysics) by full-time and part-time study.

### 19.12.1 Master of Science

1. Admission into a Master's degree program in Earth Sciences (Geology) and Earth Sciences (Geophysics) is restricted to candidates holding at least a B.Sc. degree with second class Honours. When circumstances warrant, this requirement may be waived by the School of Graduate Studies on the recommendation of the Head of the Department.
2. Each candidate will be assigned a multi-member supervisory committee. This committee shall consist of the Supervisor and at least one other member. Within two weeks of the first registration in the M.Sc. Degree program, a candidate will meet with his/her supervisory committee. Within six months, the student and the supervisory committee will agree on a written thesis proposal outlining the objectives, methods, timetable and funding for the project, and provide the proposal (signed by the student and supervisory committee) to the Head for inclusion in the student's file.
3. A candidate for the M.Sc. Degree must complete a minimum of 6 credit hours in program courses. The courses must be selected from the overview and general courses below or with the approval of the supervisory committee and Head of the Department, other graduate level courses including those offered by other departments. Depending on background and/or area of specialization, a candidate also may be required to complete additional courses in earth sciences or related subjects.
4. All course requirements should be completed within one year from the date of first registration in the M.Sc. degree program.
5. A candidate is required to give an oral presentation to the Department on the results of his/her research. This presentation must be given during the second year of the program.
6. The M.Sc. degree program will conclude with a thesis examination as prescribed in the General Regulations governing the M.Sc. degree.
7. The Supervisor and the Head of the Department may recommend to the Dean of Graduate Studies that a candidate who is not making satisfactory progress be required to withdraw from the program.

#### Courses

A selection of courses will be offered to meet the requirements of candidates as far as the resources of the Department will allow.

#### Overview Courses

7110 Physics of the Solid Earth  
 7120 Crustal Geophysics  
 7300 Changes in Global Paleoenvironment  
 7400 Tectonic Regimes  
 7410 Engineering & Environmental Geology  
 7500 Chemical Fluxes in the Earth  
 7810 Paleocology (same as the former 6810. Credit may be obtained for only one of 7810 or 6810)

#### General Courses

6070 Quantitative Techniques in Mineralogy and Metamorphic Petrology  
 6141 Rotation of the Earth  
 6142 Theory of Global Geodynamics  
 6152 Paleomagnetism  
 6171 Advanced Exploration Seismology  
 6172 Borehole Seismic  
 6175 Gravity and Magnetic Methods  
 6177 Mathematical Formulations of Seismic Wave Phenomena  
 6210 Genesis of Mineral Deposits  
 6320 Marine Geology  
 6400 Flow and Transport in Fractured Rock  
 6410 Advanced Engineering and Environmental Geology  
 6420 Deformation Mechanisms  
 6500 Stable Isotope Geochemistry  
 6510 Trace Element Geochemistry  
 6520 Methods in Advanced Research in Geochemistry  
 6540 Radiogenic Isotope Geochemistry  
 6550 Biogeochemistry  
 6600 Petroleum Geology  
 6740 Modern and Ancient Sedimentary Environments  
 6820 Palynology and Paleobotany  
 6900-6999 Special Topics in Earth Sciences

### 19.13 Environmental Science Program

#### Chair, Board of Studies

Dr. Chris Parrish

#### 19.13.1 Program of Study

1. The Environmental Science Program is an interdisciplinary graduate program involving the science-based departments of Memorial University of Newfoundland and along with the Environmental Engineering Program makes up Memorial's Environmental Studies Graduate Program. There are two Environmental Science Graduate degree streams, the Master of Science (M.Sc., Environmental Science) and the Master of Environmental Science (M.Env. Sci.).

The program is available on a full-time or part-time basis. Admission is open to students with Science or Engineering backgrounds.

2. The program is offered by the Faculty of Science and is administered by a Board of Studies appointed by the Dean of Science.

#### 19.13.2 Qualifications for Admission

Admission is limited and competitive. To be considered for admission applicants shall normally hold an Honours degree in Science with at least second class standing, or equivalent, or a Bachelor's degree in Engineering from an institution recognized by the Senate or shall have qualifications and/or environmental experience acceptable to the Dean of Graduate Studies and the Board of Studies. The Board of Studies will make recommendations on admission to the Dean of Graduate Studies.

### 19.13.3 Degree Requirements

1. To the extent that resources permit, individual programs will be developed to suit students' interests and needs. However all programs must be approved by the Board of Studies and by the Dean of Graduate Studies. All **General Regulations** of the School of Graduate Studies shall apply to these degrees.
2. **Master of Environmental Science**
  - a. The Master of Environmental Science is a multidisciplinary course-based degree, focused on environmental issues. The degree program provides for both multidisciplinary courses and for courses focused on the student's specific area of interest.
  - b. The degree program requires the completion of 27 credit hours.
    - i. Students will be required to take a minimum of 15 credit hours in program courses, 9 credit hours of which must be ENVE/ENVS 6000, ENVS 6009 and ENVS 6010 and 6 credit hours from ENVE/ENVS 6001, 6002 and 6003.
    - ii. Students will be required to take a minimum of 12 credit hours in elective courses approved by the Board of Studies, 9 credit hours of which will normally be selected from graduate courses offered by the Faculties of Science, and Engineering and Applied Science. Students are advised to consult with instructors and Faculties regarding necessary prerequisites and availability.
3. **Master of Science (Environmental Science)**
  - a. The Master of Science (Environmental Science) is a research degree which includes a thesis and course work. The thesis research will focus on environmental topics relevant to the student's background, and will be supervised by appropriate faculty, normally in the Faculties of Science and/or Engineering and Applied Science. The course component has two aims: to broaden the students' understanding of environmental issues; and to provide further training in areas of research specialization for the thesis.
  - b. Each student will have a Supervisory Committee normally consisting of a Supervisor and two others. The Supervisory Committee will be appointed by the Dean of Graduate Studies on the recommendation of the Board of Studies for Environmental Science.
  - c. The program of each student will consist of a minimum of 15 credit hours in program courses which will include ENVE/ENVS 6000 and ENVS 6010. Of the 9 credit hours remaining in program courses, 3 credit hours will be from ENVE/ENVS 6001, 6002 and 6003 and the other credit hours will be related to the student's specialty and will normally be chosen from graduate courses offered by the Faculties of Science, and Engineering and Applied Science.
  - d. All students will be required to submit a thesis embodying the results of systematic research on an approved topic. The thesis will be evaluated according to procedures outlined in General Regulation **Theses and Reports**.

#### Courses

ENVE/ENVS 6000 Environmental Science and Technology  
 ENVE/ENVS 6001 Earth and Ocean Systems  
 ENVE/ENVS 6002 Environmental Chemistry and Toxicology  
 ENVE/ENVS 6003 Applied Ecology  
 ENVS 6004 Environmental Pollution and Mitigation (Cross listed as Eng 9601)  
 ENVS 6005 Environmental Sampling and Pollutant Analysis (Cross listed as Eng 9603)  
 ENVS 6007 Environmental Risk Assessment (same as Eng 9609)  
 ENVS 6008 Air Pollution (same as Eng 9624)  
 ENVS 6009 Environmental Science Project  
 ENVS 6010 Environmental Seminar

### 19.14 Food Science

See under Biochemistry

### 19.15 Geography

#### Professor and Head of the Department

K. Storey

1. The degrees of Master of Arts and Master of Science are offered in Geography by full-time or part-time study.
2. Admission requirements are set forth in the **General Regulations** of the School of Graduate Studies and Degree Regulations for Master of Arts and Master of Science.
3. The deadline for submission of applications for admission is January 15. Candidates will normally commence their programs in the Fall semester.
4. An applicant will be admitted to a graduate program only if a faculty member agrees to act as supervisor. A supervisory committee will be established after admission, normally consisting of the supervisor and two other individuals, one of whom will normally be a member of the Department.
5. Major research areas for graduate study at the master's level are cultural, historical, economic, urban, resource management, regional development, geomorphology, Quaternary environments, climatology and geographic information sciences.
6. Candidates will register for the M.A. program if their fields of interest lie in an area of Human Geography or for the M.Sc. if their fields of interest are in Physical Geography or Geographic Information Sciences.
7. It is expected that the program of study and research for the M.A. or M.Sc. will normally be completed in a maximum of two years of full-time work, or three years of part-time work.
8. Candidates must successfully complete a minimum of 12 credit hours of graduate program courses with a minimum grade of B in each. Geography 6000 will be a required course for all candidates who have not already completed an equivalent course at the Honours or post-graduate level.
9. Candidates whose undergraduate degree is not in geography will be required to complete some additional undergraduate program courses during their first year of study, in addition to the required graduate program courses. Normally four such undergraduate courses will be required, and a minimum grade of 70% must be obtained in each.
10. Each candidate will be required to present a seminar on their research to the Department.
11. Each candidate must submit a thesis based on their own original research. This thesis will be examined in accordance with the **General Regulations** of the School of Graduate Studies.

**Courses**

A selection of the following graduate courses will be offered to meet the requirements of candidates as far as the resources of the Department will allow:

6000 Development of Geographical Thought  
 6100 Research Techniques in A Selected Field of Geography I  
 6101 Research Techniques in A Selected Field of Geography II  
 6120 Spatial Pattern Analysis and Computer Mapping  
 6150 Environmental Remote Sensing and Image Analysis  
 6200 Economic Geography I: Location Theory  
 6201 Economic Geography II: Regional Development  
 6202 Economic Geography III: Problems in Transportation  
 6203 Economic Geography IV: Land Use Pattern Analysis  
 6250 Conservation of Natural Resources  
 6300 Problems in Fisheries Geography  
 6301 Methodologies of Fisheries Geography  
 6400 Fluvial Geomorphology  
 6401 Glacial Geomorphology  
 6403 Hydrology  
 6410 Climatology  
 6420 Chronologies in Physical Geography  
 6430 Biogeography  
 6500 Cultural Geography  
 6510 Ethnic Group Settlement in the New World  
 6550 Population  
 6600 Historical Geography  
 6700 Political Geography  
 6800 Urban Geography  
 6801 Spatial Aspects of Urbanization and City System Development  
 6802 Internal Structure of Cities  
 6820 Cartographic Design  
 6830 Cartographic Production  
 6900 Graduate Seminar in Regional Geography  
 6990-95 Special Topics in Geography

**19.15.1 Geology**

See Earth Sciences

**19.15.2 Geophysics**

See Earth Sciences

**19.15.3 Instrumental Analysis**

See Chemistry

**19.15.4 Mathematics and Statistics****Head of the Department**

C. Radford

The degrees of Master of Applied Statistics (see appropriate calendar entry), Master of Science and Doctor of Philosophy are offered in the Department of Mathematics and Statistics. The Masters' degrees are offered by full-time and part-time studies.

**Specific Requirements for the M.Sc. in Mathematics**

Every candidate for the M.Sc. in Mathematics is required to take at least 18 credit hours in graduate courses, at most 3 credit hours of which may be from seminar courses. At least 9 credit hours must be from courses selected from the list below with at least 3 credit hours in each of three of the indicated subject areas. A thesis is required.

**Algebra:** 6320, 6321

**Analysis:** 6310, 6311, 6312

**Applied Mathematics:** 6201 or 6212, 6100

**Combinatorics:** 6340, 6341, 6342

**Topology:** 6300 or 6301, 6332

**Specific Requirements for the M.Sc. in Statistics**

Every candidate for the M.Sc. in Statistics is required to take at least 18 credit hours in graduate courses, at most 3 credit hours of which may be from seminar courses. A thesis is required.

**Table of Credit Restrictions for Present Mathematics Courses with Former Mathematics Courses**

Credit may be obtained for only one course from each of the pairs listed in this table.

Present Course	Former Course	Present Course	Former Course
6323	6030	6212	6080
6321	6032	6310	6130
6322	6035	6330	6200
6340	6040	6331	6210
6341	6041	6332	6350
6342	6042	6312	6500

**Courses**

A selection of the following graduate courses will be offered to meet the requirements of candidates, as far as the resources of the Department will allow:

**Mathematics**

6100 Dynamical Systems  
 6101 Modern Perturbation Theory  
 6102-6109 Special Topics in Applied Mathematics  
 6120 The Theoretical Fluid Dynamics  
 6121 Functional Differential Equations  
 6201 Numerical Methods for Partial Differential Equations  
 6202-6209 Special Topics in Numerical Analysis  
 6210 Numerical Solution of Differential Equations (for Computational Science students only - required core course)  
 6212 Numerical Methods for Initial Value Problems  
 6300 Algebraic Topology I (Homology Theory)  
 6301 Algebraic Topology II (Homotopy Theory)  
 6302 Algebraic Topology III (Theory of Fibre Bundles)  
 6304-6309 Special Topics in Topology  
 6310 Functional Analysis  
 6311 Complex Analysis  
 6312 Measure Theory  
 6313-6319 Special Topics in Analysis  
 6320 Group Theory  
 6321 Ring Theory  
 6322 Nonassociative Algebra  
 6323 Homological Algebra  
 6324-6329 Special Topics in Algebra  
 6330 Analytic Number Theory  
 6331 Algebraic Number Theory  
 6332 Point Set Topology  
 6340 Graph Theory  
 6341 Combinatorial Design Theory  
 6342 Advanced Enumeration  
 6343-6349 Special Topics in Combinatorics  
 6910 Topology Seminar  
 6940 Analysis Seminar  
 6950 Algebra Seminar

**Statistics**

6503 Stochastic Processes  
 6505 Survival Analysis  
 6510 Mathematical Statistics  
 6520 Linear Models  
 6530 Generalized Linear Longitudinal Mixed Models  
 6540 Time Series Analysis  
 6545 Statistical Computing  
 6550 Nonparametric Statistics  
 6560 Continuous Multivariate Analysis  
 6561 Categorical Data Analysis  
 6570-6589 Selected Topics in Statistics and Probability  
 6590 A Course in Statistical Consulting  
 6930 Statistics Seminar

**19.16 Physics and Physical Oceanography****Professor and Head of the Department**

J. Whitehead

Programs leading to the degree of Master of Science in Physics and in Physical Oceanography are offered to both full and part-time students. Because Oceanography is multidisciplinary in nature, undergraduate students who plan to undertake Physical Oceanography studies are urged to consult the faculty member in charge of Physical Oceanography programs at their earliest opportunity, in order to ensure the appropriateness of their undergraduate course selections. The degree of Doctor of Philosophy in Physics is offered through both full-time and part-time study in Atomic and Molecular Physics, Condensed Matter Physics, and Physical Oceanography. The following Departmental Regulations are supplementary to the General Regulations governing the M.Sc. and Ph.D. degrees. A thorough familiarity with the latter Regulations should be regarded as the prerequisite to further reading in this section.

The Department of Physics and Physical Oceanography compiles, and regularly reviews, a brochure which contains reasonably detailed descriptions of currently active research projects, as well as a comprehensive listing of recent research publications, and other material which may be of interest to prospective graduate students.

**19.16.1 Master of Science**

1. Admission to a M.Sc. program in the Department of Physics and Physical Oceanography is normally restricted to candidates holding an Honours B.Sc. degree in Physics. However, depending on background and area of specialization and with particular reference to Physical Oceanography, other Baccalaureate degrees in science, applied science or mathematics, may be accepted.
2. A program of study for the M.Sc. degree in Physics or Physical Oceanography shall normally include a minimum of 12 graduate credit hours. However, depending on the student's background and area of specialization, more or fewer graduate and/or undergraduate courses may be required.
3. Except with the special permission of the Department and the approval of the Dean of Graduate Studies, a candidate may not take any courses in addition to those approved for his/her M.Sc. program.
4. Before submission of the thesis to the School of Graduate Studies for examination, the student must present a seminar on the topic of his/her thesis research.

**Courses**

A selection of the following graduate courses will be offered to meet the requirements of candidates, as far as the resources of the Department will allow:

6000 Condensed Matter Physics I  
 6001 Condensed Matter Physics II  
 6002 Superconductivity  
 6003 Path Integral Techniques in Condensed Matter Physics  
 6010-19 Special Topics in Condensed Matter Physics  
 6040 Biophysics  
 6060-69 Special Topics in Interdisciplinary Areas  
 6200 Nonlinear Dynamics  
 6308 Ocean Dynamics I  
 6309 Ocean Dynamics II  
 6310 Physical Oceanography  
 6313 Physical Fluid Dynamics  
 6315 Polar Oceanography  
 6316 Ocean Measurements and Data Analysis  
 6317 Ocean Acoustics  
 6318 Numerical Modeling  
 6319 Climate Dynamics  
 6320 Turbulence  
 6321 Coastal Oceanography  
 6322 Stratified Fluids  
 6323 Stability Theory  
 6324 Models in Ocean Ecology  
 6360-69 (excluding 6363) Special Topics in Physical Oceanography  
 6363 Laboratory Experiments in Geophysical Fluid Dynamics  
 6400 Statistical Mechanics  
 6402 Theory of Phase Transitions  
 6403 Stochastic Processes, Time-Dependent and Non-equilibrium Statistical Mechanics  
 6502 Electrodynamics  
 6720 Theory of Molecules  
 6721 Molecular Spectroscopy  
 6722 Light Scattering Spectroscopy  
 6730 Molecular Theory of Liquids and Compressed Gases  
 6740 Physics of Atomic Collisions  
 6760-69 Special Topics in Atomic and Molecular Physics  
 6800 Group Theory  
 6810-19 Special Topics in Theoretical and Mathematical Physics  
 6850 Quantum Mechanics I  
 6851 Quantum Mechanics II  
 6910-19 Special Topics in Experimental and Applied Physics

**Table of Course Restrictions - Physics and Physical Oceanography**

Credit May Be Obtained for Only One Course From Each of the Pairs Of Courses Listed in This Table

Present Course	Former Course	Present Course	Former Course
6001	6051	6321	6303
6002	6822	6321	6304
6003	6820	6323	6303
6200	6821	6402	6401
6308	6312	6403	6401
6309	6311	6403	6824
6313	6301	6502	6500
6316	6302	6502	6501
6317	6823	6722	6790

Members of the department carry out research in several areas of experimental and theoretical physics, including atomic and molecular physics, condensed matter physics, physical oceanography, theoretical geophysics and applied nuclear physics. In atomic and molecular physics, there are experimental programs in collision-induced infrared absorption spectroscopy, electron emission spectroscopy of simple molecules, molecular ions and free radicals, laser-induced fluorescence spectroscopy, and Raman spectroscopy, and theoretical work on atomic and molecular collisions. The work in condensed matter physics includes experimental programs in solid state nuclear magnetic resonance on systems of biophysical interest, Raman spectroscopy of lipid bilayers and membranes, studies of phase transitions using Brillouin and Raman spectroscopy, studies of instabilities and pattern formation in simple fluid dynamical systems, and spectroscopic studies of molecular crystals. Theoretical condensed matter physics research involves studies of magnetism, superconductivity, and the statistical mechanics of polymers and lipid bilayers. The physical oceanography group carries out field and laboratory research on several projects which take advantage of Newfoundland's unique oceanographic environment, using acoustic and other remote sensing techniques. These include studies of circulation on the Newfoundland and Labrador shelves, Labrador current dynamics, fjord dynamics, submarine canyons and sediment transport dynamics in the nearshore zone and on the shelf. Theoretical oceanographic studies involve the modelling of ocean circulation, gravity wave phenomena and other aspects of ocean dynamics. Research in theoretical geophysics is concentrated on whole-Earth dynamics, with special emphasis on the physics of the liquid core (the Earth's "third ocean") as inferred from its wave spectrum and the associated momentum transfer to the deformable solid parts of the Earth. In nuclear physics, research is done on the atmospheric concentrations of radioactive elements and on dosimetry for medical applications.

Note: For Geophysics, see EARTH SCIENCES

## 19.17 Psychology

### Professor and Interim Head of the Department

G.M. Martin

The degree of Master of Science is offered in Experimental Psychology. The degree of Doctor of Philosophy is offered in Experimental Psychology. Interested students may wish to consult the sections in the Calendar describing the Master of Applied Social Psychology (Cooperative) program and the Master of Science and Doctor of Philosophy in Cognitive and Behavioural Ecology programs.

### Applications

All applicants are required to submit results from the General section of the Graduate Record Examinations.

At least one letter of reference should come from someone who is familiar with the applicant's research capability.

Applicants applying to programs in Cognitive, Perception and Animal Learning are required to submit with their applications an example of their academic writing. This could include, but is not limited to, papers submitted in class, Honour's thesis, etc.

### 19.17.1 Master of Science

A candidate may be accepted into a program leading to the M.Sc. in Experimental Psychology.

#### Experimental Psychology

The areas of specialization offered are: Animal Behaviour (see Cognitive and Behavioural Ecology Program), Behavioural Neuroscience, Cognitive Psychology, Developmental Psychology, and Social Psychology.

Candidates in Behavioural Neuroscience shall normally complete 12 credit hours. Candidates in other areas of Experimental Psychology shall normally complete 18 credit hours. At the beginning of his/her program, the student will normally be required to take Advanced Statistics in Psychology (6000) unless he or she has already passed an equivalent Honours or graduate course. Other courses in statistics (6001) may be required on an individual student's program. The courses which make up the balance of the individual's program will be chosen to best suit the area of specialization. In addition, every candidate shall submit an original thesis based upon an approved experimental research topic.

#### Courses

A selection of the following graduate courses will be offered to meet the requirements of candidates, as far as the resources of the Department will allow:

6000 Advanced Statistics in Psychology

6001 Research Design

6100-6114 Special Topics in Experimental Psychology

6200 Learning I

6201 Learning II

6203 Behavioural Pharmacology

6210 Behavioural Analysis of Toxins

6350 Behavioural Ontogeny (*Cross-listed as Biology 6350*)

6351 Behavioural Ecology and Sociobiology (*Cross-listed as Biology 6351*)

6355 Field Course in Animal Behaviour (*Cross-listed as Biology 6355*)

6400 Theory and Methods in Social Psychology

6401 Social Cognition

6402 Group Processes

6403 Advanced Methods in Applied Social Psychological Research

6404 Project in Applied Social Psychology *NOTE: This course is open only to students in the Master of Applied Social Psychology*

6500 Developmental Psychology I

6501 Developmental Psychology II

6502 Developmental Changes During Old Age

6700 Perception

6710 Human Information Processing

6720 Human Memory

6800 Behavioural Neuroscience I

6801 Behavioural Neuroscience II

6810 Psychometrics

6910 Personality

## 20 Regulations Governing the Degree of Master of Science in Kinesiology

### Director of the School

M.H. Bluehardt

The degree of Master of Science in Kinesiology is offered to qualified full-time and part-time students by the School of Human Kinetics and Recreation. The **General Regulations** of the School of Graduate Studies of Memorial University of Newfoundland outlined in the current Calendar, and the Degree Regulations of the School of Human Kinetics and Recreation outlined below will apply to the Master of Science in Kinesiology program.

### 20.1 Qualifications for Admission

1. The admission requirements for the Master of Science in Kinesiology are as given under the **General Regulations** of the School of Graduate Studies. Admission is limited and competitive. Preference for admission may be given to students with undergraduate degrees in relevant disciplines, with a minimum overall B average. Applications submitted through the School of Graduate Studies will be evaluated by the Graduate Studies Committee of the School of Human Kinetics and Recreation. Admission of a candidate to the program shall be made by the Dean of Graduate Studies.
2. Only in exceptional circumstances, and only on the recommendation of the Director of the School of Human Kinetics and Recreation, shall the Dean of Graduate Studies consider applicants who do not meet the requirements above.

## 20.2 Program and Degree Requirements

1. The degree of Master of Science in Kinesiology is offered in the areas of Exercise and Work Physiology, Biomechanics/Ergonomics and Sport Psychology.
2. The program of a candidate for the Master of Science in Kinesiology shall be the responsibility of the Supervisory Committee, composed of the Supervisor and at least one other faculty member recommended with the concurrence of the Supervisor by the Director of the School, or delegate.
3. Candidates for the Master of Science in Kinesiology shall be required to complete a minimum of 15 credit hours plus a thesis. HKR 6000 is normally required for all candidates. The remaining course requirements will be selected, in agreement with the Supervisory Committee, to reflect the kinesiology areas of specializations offered within the School.
4. It is the responsibility of the student to arrange regular meetings with their supervisory committee. An annual report, prepared by the Supervisor and signed by all members of the Supervisory Committee and the student, is submitted to the Director of the School of Human Kinetics and Recreation (or delegate) as required by the School of Graduate Studies.
5. Depending on the background of the candidate or his/her area of intended specialization, a candidate's program may be modified. Such modifications may include a reduction in course requirements where a student demonstrates that he or she brings graduate level competency to their program in specific areas, or may include additional graduate or undergraduate courses, as specified by the student's Supervisory Committee. A minimum of three courses or 9 credit hours completed in the School of Human Kinetics and Recreation is mandatory.
6. A student completing a Master of Science in Kinesiology will be required to present a thesis proposal for his or her proposed thesis normally by the end of the third semester of study. Candidates will be questioned on their proposal by a three-member panel appointed by the Director in consultation with the Supervisory Committee. Any deficiencies noted during the proposal should be carefully considered by the student and the Supervisory Committee prior to approval of the thesis topic.
7. All graduate students are expected to attend and participate in the School of Human Kinetics and Recreation seminars and thesis proposal presentations.
8. In conjunction and collaboration with other Faculties and Schools of Memorial University of Newfoundland, students may pursue their special interests through electives from departments/schools outside the School of Human Kinetics and Recreation. These courses must be approved by the Graduate Studies Committee and the Dean of Graduate Studies in the preceding semester.

## 20.3 Courses

1. In order to continue as a candidate for a Master of Science in Kinesiology degree, a candidate who receives a final grade of "C" or less in a program course must repeat that course and obtain a minimum grade of "B". In the case of an elective course a suitable replacement course, acceptable to the Graduate Studies Committee of the School of Human Kinetics and Recreation, may be substituted for the failed course. Only one such repetition/replacement shall be permitted in the candidate's graduate program. Should a grade of lower than "B" be obtained in the repeated course/replacement course, or any other program course, the candidate shall be required to withdraw from the program.
2. When the Graduate Studies Committee of the School of Human Kinetics and Recreation has determined, through consultation with the candidate, the instructors of graduate courses, and the program advisor or thesis supervisor that the candidate's work has fallen below satisfactory level, it may request that the Director of the School of Human Kinetics and Recreation recommend to the Dean of Graduate Studies that the candidate's program be terminated.
3. Candidates may apply for transfer course credits. All course transfers require the approval of the Dean of Graduate Studies, on the recommendation of the Director of the School of Human Kinetics and Recreation, and are subject to General Regulation **Program Requirements, Transfer of Course Credits** of the School of Graduate Studies.

## 20.4 Period of Study

The period of study for a graduate program shall not normally exceed seven years beyond first registration.

1. A candidate in full-time attendance may register for a maximum of 12 credit hours in any regular semester and a maximum of 6 credit hours in intersession or summer session.
2. A candidate in part-time attendance may register for a maximum of 3 credit hours in any semester, including intersession or summer session.

## 20.5 Thesis

The School of Graduate Studies General Regulation describes the requirements in **Theses and Reports**.

### Courses

6000 Quantitative methods in physical education  
 6001 Qualitative research methods in physical education  
 6130 Computer applications in physical education  
 6201 Foundations of sport psychology and mental training techniques  
 6202 Intervention and enhancement techniques in mental training consultation  
 6203 Sport psychology consulting  
 6310 Exercise Physiology I  
 6320 Exercise Physiology II  
 6340 Occupational biomechanics  
 6610-15 Individual reading and research in special areas

# 21 Regulations Governing the Degree of Master of Science in Medicine

### Professor of Medicine and Dean

J Rourke

### Professor and Assistant Dean

P.F. Moody-Corbett

There are eight program areas in the Faculty of Medicine: Applied Health Services Research, Cancer, Cardiovascular and Renal Sciences, Clinical Epidemiology, Community Health, Human Genetics, Immunology, and Neurosciences. Each program area has a coordinator who is responsible to communicate the interests of the programs to the Faculty of Medicine Graduate Studies Committee



and participates in the admission of graduate students into the program in Medicine.

The degree of Master of Science in Medicine (in all of the programs excluding the Applied Health Services Research Program) is offered in the Faculty of Medicine to full-time and part-time students. The Applied Health Services Research program is offered by full-time study only. The graduate diploma programs in Community Health and Clinical Epidemiology are offered by part-time study only.

The following regulations will apply in conjunction with the **General Regulations** of the School of Graduate Studies.

## 21.1 Master of Science in Medicine

### 21.1.1 Qualification for Admission

The admission requirements for each of the M.Sc. Program areas in Medicine are described under Programs of Study.

### 21.1.2 General Program Requirements

1. The program of study for the M.Sc. in Medicine degree is the responsibility of the supervisory committee composed of a supervisor and at least two other faculty members.
2. It is the responsibility of the supervisory committee to meet regularly (at least annually) with the student and to provide guidance at all stages of the candidate's program. An annual report prepared by the supervisor and signed by the student and all members of the committee is required to be submitted to the Assistant Dean of Research and Graduate Studies (Medicine).
3. Course requirements are set by each of the program areas and are described under **Programs of Study**. In addition, all students will be required to complete GRAD 9991 (Graduate Research Integrity Program).
4. In addition to courses and research, graduate students are expected to participate in Faculty of Medicine seminars and journal clubs.

### 21.1.3 Programs of Study

#### 1. Applied Health Services Research

The Applied Health Services Research program is jointly offered by the University of New Brunswick (UNB), Memorial University of Newfoundland, and Dalhousie University (Dal). Students will be educated in an interdisciplinary environment and will develop a substantive understanding of: the Canadian health system, the conduct of ethical research, critical appraisal, appropriateness of research design for particular policy questions and determinants of health models. They will also gain first-hand exposure in a decision-making/policy environment. Access to specific computer software and the Internet is required and will be the responsibility of each student.

##### a. Administration

- i. An Executive Committee, consisting of the Deans of Graduate Studies, the Program Directors and student representation from UNB, Memorial University of Newfoundland, and Dal will oversee the academic program across the Universities and ensure program integrity.
- ii. A Program Management Committee, consisting of the Program Directors and Site Coordinators from UNB, Memorial University of Newfoundland, and Dal will oversee the operation of the program.
- iii. At Memorial University of Newfoundland, the program shall be administered through the Office of Research and Graduate Studies (Faculty of Medicine) by a Program Director who shall be appointed by the Dean of Graduate Studies on the recommendation of the Dean, Faculty of Medicine.

##### b. Qualifications for Admission

- i. Admission is limited and competitive. To be considered for admission to the program, an applicant shall normally have a bachelor's degree with a minimum B+ average or GPA of 3.3 from an institution recognized by the Senate. Normally, students should have completed an undergraduate course in statistics.
- ii. Students are normally admitted to the Fall semester (September). The deadline for receipt of applications is April 1. Late applications will only be considered if admissions decisions have not yet been made.

##### c. Program Requirements

- i. All students will be required to complete eight core courses, the Graduate Research Integrity Program, a four-month residency placement and a thesis. In addition, candidates must participate in three conference workshops each of a week's duration.
- ii. Prior to submission of the thesis to the School of Graduate Studies for examination (see General Regulation **Theses and Reports**), candidates shall present an open seminar.
- iii. Outline of program of study:

Semester 1 - Fall	Semester 2 - Winter	Semester 3 - Spring	Semester 4 - Fall	Semester 5&6 - Winter & Spring
MED 6282 MED 6290 MED 6284 GRAD 9991 Conference 1 Theme: Research Issues and Critical Appraisal	MED 6286 MED 6288 MED 6292 Conference 2 Theme: Policy and Decision Making	Residency Placement: All candidates are required to complete a 16-week residency placement. The residency placement is negotiated by the Program Director in consultation with the student and governed by the agreements outlined in the Atlantic Regional Training Centre residency manual.	MED 6293 MED 6294 Conference 3 Theme: Communication and Dissemination	Thesis, including public presentation

#### 2. Cancer Research

The graduate program in cancer research offers study in fundamental cell and molecular biological areas including viral

oncogenesis, growth factors and oncogenes in developmental models, programmed cell death and drug resistance.

a. Qualifications for Admission

The admission requirements are as given under the General Regulations governing Master's degrees. All courses in the program have as a prerequisite, successful completion of an advanced, upper-level biochemistry, biology or medical course, with an emphasis on molecular biology or medicine.

b. Program Requirements

- i. All students are required to attend, for credit, and participate in the Cancer Research Journal Club (Cancer Seminars, MED 6400-6403) for a minimum of four semesters. One other graduate course (chosen from MED 6580, 6590, 6591, 6340, 6341 or 6342) is required for M.Sc. Medicine students although other courses may be required in individual cases.
- ii. The M.Sc. in Medicine requires the completion of a research project and a written thesis.

3. **Cardiovascular and Renal Science**

The graduate program in cardiovascular and renal science enables students to pursue research and academic studies in selected topics including hypertension and stroke, neural control of vasculature, heart and blood pressure. The faculty participating in the program consist of basic cardiovascular scientists and renal clinicians. Teaching within the program is integrated with the M.D. program.

a. Qualifications for Admission

The admission requirements are as given under the General Regulations governing Master's degrees.

b. Program Requirements

- i. Students will be required to take a minimum of two graduate courses. Basic Cardiovascular and Renal Physiology (MED 6140) is required and must be taken in the first year of the program. Students will choose a second course from MED 6141, 6142, 6143 or 6144.
- ii. The M.Sc. in Medicine requires the completion of a research project and a written thesis.

4. **Clinical Epidemiology**

The program in clinical epidemiology is aimed at university graduates intending a career in health services, faculty members seeking advanced training in clinical epidemiology, medical doctors and health care professionals interested in health care delivery research.

a. Qualifications for Admission

The admission requirements are as given under the General Regulations governing Master's degrees. In exceptional circumstances, a professional equivalent qualification will be considered for admission.

b. Program Requirements

- i. Students are required to take four courses: Biostatistics I (MED 6200), Basic Clinical Epidemiology (MED 6250), Clinical Research Design (MED 6255) and Applied Data Analysis for Epidemiology (MED 6260). In addition students are required to attend scheduled epidemiology seminars.
- ii. The M.Sc. in Medicine requires the completion of a research project and a written thesis.

5. **Community Health**

The graduate program in community health enables students to pursue research and academic studies in selected topics including community health, epidemiology, socio-behavioural health, biostatistics, health services utilization, health policy and health promotion.

a. Qualifications for Admission

The admission requirements are as given under the General Regulations governing Master's degrees. In exceptional circumstances, a professional equivalent qualification will be considered. Students are expected to have successfully completed at least one basic university-level statistics course.

b. Program Requirements

- i. Students are required to take four core courses: Introduction to Community Health (MED 6220), Biostatistics I (MED 6200), Epidemiology I (MED 6270) and Community Health Research Methods (MED 6280) and to attend, for credit, and participate in four semester-length seminar courses (MED 6400-6403).
- ii. The M.Sc. in Medicine requires the completion of a research project and a written thesis.

6. **Human Genetics**

The graduate program in human genetics will enable students to pursue academic studies and research in a number of areas of genetics including cancer genetics, genetic epidemiology, gene mapping, medical genetics, birth defects and population genetics. Faculty members from all three divisions of the Faculty of Medicine (Basic Sciences, Community Health and Clinical Sciences) participate in the program.

a. Qualifications for Admission

The admission requirements are as given under the General Regulations governing Master's degrees. Applicants with backgrounds in the fields of genetics, biochemistry and biology are preferred.

b. Program Requirements

- i. Students will be required to complete a minimum of two graduate courses. Within the Human Genetics program the following courses are offered: Human Molecular Genetics (MED 6393), Human Population Genetics (MED 6390), Applied Human Genetics (MED 6392) and Selected Topics in Human Genetics (MED 6391). In addition, there are a number of courses in other graduate programs which could be suitable for some students in this program, including Epidemiology I (MED 6270), Molecular Biology of Cancer (MED 6580), Molecular Biology I (MED 6590) and Molecular Biology II (MED 6591). Course selection for each student is determined by the supervisory committee in consultation with the student and is based on the area of study and past course credits.
- ii. Students are expected to participate in the activities of the genetics group. These include the weekly Journal Club/Research Discussion Group and the Genetics Seminar Series.
- iii. The M.Sc. in Medicine requires the completion of a research project and a written thesis.

7. **Immunology**

The immunology group has an interdisciplinary character and consists of faculty from basic medical sciences, clinical sciences and oncology research. The graduate programs are designed to provide individualized training oriented towards basic research and a solid scientific background in the discipline of immunology.

a. Qualifications for Admission

The admission requirements are as given under the General Regulations governing Master's degrees. A Bachelor of Science degree or equivalent is required.

b. Program Requirements

- i. Students in the program are required to take three core courses: Immunology I (MED 6127), Immunology II (MED 6128) and Advanced Immunological Methods (MED 6130). Some students may be required to take additional courses depending upon their thesis topic. The immunology course for pharmacy students (PHAR 4105) is a required course for students who have not previously taken an undergraduate immunology course. All students are required to attend, for credit, and participate in the Immunology Journal Club (MED 6400-6403) for a minimum of three semesters.
- ii. The M.Sc. in Medicine requires the completion of a research project and a written thesis.

8. **Neurosciences**

The Neuroscience Program offers graduate studies in an interdisciplinary setting including faculty from basic medical sciences within the Faculty of Medicine and Department of Psychology in the Faculty of Science. Graduate students may pursue research in a number of specialty areas including the physiological basis of learning and memory, stroke and neuroplasticity, neuroregeneration, signal transduction mechanisms, neuronal circuitry and membrane physiology. The Neuroscience Program is a Chapter of the Society for Neuroscience.

a. Qualifications for Admission

The admission requirements are as given under the General Regulations governing Master's degrees. It is expected that the students will have had courses in biochemistry, biology and/or psychology with some exposure to basic university-level statistics.

b. Program Requirements

- i. Students in the program are required to take two core courses in Neuroscience: Cellular Neuroscience (MED 6197) and Systems Neuroscience (MED 6196). Some students may be required to take additional course work depending on their background qualifications.
- ii. Students are expected to attend and participate in the activities of the neuroscience group including the weekly seminar and journal club.
- iii. The M.Sc. in Medicine requires the completion of a research project and a written thesis.

## 21.2 Graduate Diploma

The Faculty of Medicine offers a Graduate Diploma providing an opportunity for professionals and individuals within the health sector to obtain or upgrade their training in Community Health or Clinical Epidemiology.

### 21.2.1 Qualifications for Admission

To be admitted to the graduate diploma program a student must be eligible to register as a graduate student, as given under the General Regulations governing M.Sc. degrees. In special circumstances, and upon the recommendation of the Community Health or Clinical Epidemiology Coordinator, a suitable combination of training and professional experience relevant to the program may be acceptable for admission.

### 21.2.2 Program Requirements

A Graduate Diploma in Community Health requires successful completion of Medicine 6200, 6220 and 6270.

A Graduate Diploma in Clinical Epidemiology requires successful completion of Medicine 6200, 6250 and 6255.

#### Courses

6070 Seminars in Physiological Instrumentation  
 6090-6119 Special Topics  
 6127 Immunology I  
 6128 Immunology II (Prerequisite Medicine 6127)  
 6130 Advanced Immunological Methods  
 6131-6139 Special Topics  
 6140 Basic Cardiovascular and Renal Physiology  
 6141 Cardiovascular/Renal Techniques  
 6142 Selected Topics in Cardiovascular and Renal Physiology  
 6143 Cardiovascular Anatomy  
 6144 Current Concepts in Cardiovascular and Renal Pathophysiology  
 6180 Structure, Function and Pharmacology of Muscle  
 6190 General Pharmacology  
 6192 Pharmacology of Receptors and Receptor Effector Coupling Processes  
 6193 Advanced Topics in Neuroscience  
 6194 Advanced Topics in Physiology  
 6195 Neurobiology of Nervous System Diseases  
 6196 Systems Neuroscience  
 6197 Cellular Neuroscience  
 6200 Biostatistics I  
 6201 Elementary Statistics (one-credit hour)  
 6202 Univariate Inference (Prerequisite: 6201) (one-credit hour)  
 6203 Multivariate Inference (Prerequisite: 6202) (one-credit hour)  
 6220 Introduction to Community Health  
 6221 Concepts of Public Health (one-credit hour)  
 6222 Health Protection and Disease Prevention (Prerequisite: 6221) (one-credit hour)  
 6223 Health Promotion (Prerequisite: 6222) (one-credit hour)  
 6250 Basic Clinical Epidemiology  
 6251 Introduction to Clinical Epidemiology (one-credit hour)  
 6252 Critical Appraisal (Prerequisite: 6251) (one-credit hour)  
 6253 Clinical Measurement (Prerequisite: 6252) (one-credit hour)  
 6255 Clinical Research Design  
 6260 Applied Data Analysis for Clinical Epidemiology

6270 Epidemiology I  
 6271 Principles of Epidemiology (one-credit hour)  
 6272 Observational Study Design (Prerequisite: 6271) (one-credit hour)  
 6273 Survey Methodology (Prerequisite: 6272) (one-credit hour)  
 6280 Community Health Research Methods  
 6282 Canadian Health Care System  
 6284 Research and Evaluation Design and Methods  
 6286 Ethical Foundations of Applied Health Research  
 6288 Policy and Decision Making  
 6290 Determinants of Health: Healthy Public Policy  
 6292 Qualitative & Quantitative Methods for Health Services Research  
 6293 Knowledge Transfer and Research Uptake  
 6294 Advanced Qualitative Methods  
 6295 Advanced Quantitative Methods  
 6296 Residency  
 6340 Research Topics in Cancer I  
 6341 Research Topics in Cancer II  
 6342 Basic Principles of the Pathology of Cancer  
 6390 Human Population Genetics  
 6391 Selected Topics in Human Genetics  
 6392 Applied Human Genetics  
 6393 Human Molecular Genetics  
 6394 Cancer Genetics  
 6400 Research Seminars for M.Sc Students I (one-credit hour)  
 6401 Research Seminars for M.Sc Students II (one-credit hour)  
 6402 Research Seminars for M.Sc Students III (one-credit hour)  
 6403 Research Seminars for M.Sc. Students IV (one-credit hour)  
 6410 Research Seminars for Ph.D. Students I (one-credit hour)  
 6411 Research Seminars for Ph.D. Students II (one-credit hour)  
 6412 Research Seminars for Ph.D. Students III (one-credit hour)  
 6413 Research Seminars for Ph.D. Students IV (one-credit hour)  
 6420 Medical Science/Social Responsibility in Health Care: Aspects of Medical History (Same as History 6125)  
 6580 Molecular Biology of Cancer (Prerequisites: Biology 4241, Biochemistry 4100 [or equivalent])  
 6590 Molecular Biology I - *Cross listed as Biology 6590 and Biochemistry 6590* (Prerequisites: Biology 4241, Biochemistry 4100 [or equivalent])  
 6591 Molecular Biology II - *Cross listed as Biology 6591 and Biochemistry 6591* (Prerequisites: Biology 4241, Biochemistry 4100 [or equivalent])

## 22 Regulations Governing the Degree of Master of Science in Pharmacy

### Associate Professor and Director of Pharmacy

L.R. Hensman

The degree of Master of Science in Pharmacy is offered to qualified full-time and part-time students by the School of Pharmacy. The **General Regulations** of the School of Graduate Studies of Memorial University of Newfoundland outlined in the current Calendar, and the Degree Regulations of the School of Pharmacy outlined below will apply to the M.Sc. Pharm. program. Every candidate in graduate studies shall comply with the **General Regulations**, the Degree Regulations and all additional requirements of the School of Pharmacy.

### 22.1 Qualifications for Admission

Admission to the M.Sc. Pharm. program will be offered on the basis of academic excellence. The basic requirements for admission are those established by the School of Graduate Studies of Memorial University of Newfoundland. The minimum qualification for admission is a recognized four-year undergraduate degree in Pharmacy, or a recognized four-year undergraduate degree in physical, chemical or biological science, or equivalent, with an overall B average.

Applications submitted through the School of Graduate Studies will be evaluated by the Graduate Studies Committee of the School of Pharmacy. No candidate will be admitted to the program without a recommendation of acceptance by the Graduate Studies Committee. Admission of a candidate to the M.Sc. Pharm. program shall be made by the Dean of Graduate Studies.

### 22.2 Formulation of Program of Study

Upon acceptance to the program, the supervisor will assess the student's research interests, background, strengths and weaknesses. The supervisor will formulate a program of study (see below) and select a supervisory committee for the student. The program of study will be selected on the basis of the thesis research, the background of the student, and the perceived need for specific graduate courses that will complement the student's working knowledge in his/her area of research. The supervisory committee will include the supervisor, one other academic staff person from the School of Pharmacy, and one external academic staff person from Memorial University of Newfoundland. This committee will advise the student about his/her thesis research. Accordingly, they will meet with the student within two months of his/her initial registration, at the end of the second semester (8th month of study), at the end of the fourth semester (16th month), and immediately before the student begins to write the thesis. Both the program of study and the supervisory committee must be approved by the Graduate Studies Committee.

### 22.3 Program of Study

1. Minimum requirements for the M.Sc.Pharm. degree will be the successful completion of:
  - a. Six credit hours in program graduate courses chosen from those available in Pharmacy, Medicine or Biochemistry.
  - b. Pharmacy Seminar
  - c. A thesis embodying original research
2. Graduate courses will be chosen based on the academic background of the student and the area of his/her thesis research.

Note: *Qualified students accepted into the program who are considered to have an insufficient background for their thesis research may be required to successfully complete additional courses as selected by their supervisor.*

3. Pharmacy Seminar: All candidates for the Degree of M.Sc. (Pharm.) will be required to participate in the Pharmacy Seminar during the first two years of their program. Selected topics in pharmaceutical sciences will be presented and discussed by faculty, students and visiting speakers. Graduate students will be required to present one seminar each year. In the second year of study, the graduate student will present a progress report of his/her research in the seminar. Upon successful completion of the seminar the Chair of the Graduate Studies Committee will so notify the Dean of Graduate Studies.

#### Courses

Permission of the instructor and the Graduate Studies Committee of the School of Pharmacy is required for admission to any of the graduate Pharmacy courses.

6000 Medicinal Chemistry  
 6001 Advanced Physical Pharmacy  
 6002 Dosage Form Design & Novel Drug Delivery Systems  
 6003 Pharmacokinetic Modeling  
 6004 Principles of General Pharmacology  
 6005 Toxicology of Therapeutic Agents and Chemicals  
 6100-6104 Special Topics in Pharmacy

#### M.Sc. Pharmacy Thesis

Every candidate shall submit a thesis to the School of Graduate Studies. The thesis shall contain original research conducted by the candidate and approved by the supervisory committee.

In preparation for the thesis examination, the candidate will provide a copy of the thesis to each member of the supervisory committee. Each member of this committee will submit a written report to the Chairman of the Graduate Studies Committee.

Before the thesis is submitted, the student shall present an open seminar on the topic of investigation to the School of Pharmacy. Any serious deficiencies noticed at this stage should be carefully considered, in consultation with the supervisory committee, for revision.

Three copies of the thesis shall be submitted to the School of Graduate Studies through the School of Pharmacy, in a form and format as specified by the School of Graduate Studies.

As specified in General Regulation **Theses and Reports** of the School of Graduate Studies, the written thesis will be reviewed by examiners appointed by the Dean of Graduate Studies on the recommendation of the Director of the School of Pharmacy or the Chairman of the Graduate Studies Committee.

## 23 Regulations Governing the Degree of Master of Social Work

#### Associate Professor and Director

S. Birnie-Lefcovitch

The degrees of Master of Social Work and Doctor of Philosophy are offered in social work.

The MSW may be completed by part-time or full-time study. Except for internships and the institute component of practice courses, courses are delivered by distance format, and not in a regular classroom format. "Distance delivery" includes course delivery using any or all of web-based format, traditional correspondence (readings packages, mailed assignments), and tele or videoconferencing.

The degree of MSW is offered in selected specializations. The program allows professionally qualified social workers holding the Degree of BSW or an equivalent professional undergraduate degree in Social Work to undertake intensive advanced work in a specialized area of social work knowledge and practice. The particular specializations offered may change from time to time, according to resources, societal needs, the state of knowledge and trends in professional practice. Currently, advanced clinical practice is the specialization offered.

Students admitted to the MSW program prior to 1999 who are enrolled in specializations which are no longer offered, should consult with the Graduate Officer in the School of Social Work to discuss options for completion.

The program is designed to be accessible to students in remote and rural areas, and assumes that: (1) students will have a computer and internet access; and, (2) can travel to St. John's for the institute portion of the three practice courses. Students studying outside St. John's, Newfoundland, will also be expected to purchase internet service or to incur long distance charges for accessing their Memorial University of Newfoundland internet account.

The deadline date for receipt of applications for admission in September of each year is February 28. Under special circumstances, late applications and admissions in other semesters may be considered.

Entrance into all courses and the offering of any course in an academic year is by approval of the School, consistent with the candidate's program. Candidates are admitted only into a designated program of studies in an area of specialization.

The School of Social Work may deliver special offerings of the MSW and/or other programs of the School to identified groups of out-of-province students where numbers warrant. These offerings will be self supporting, and therefore subject to an additional one-time non-refundable tuition fee as approved by the Board of Regents and payable on first registration following formal admission to the program. Students will also pay appropriate tuition fees for each semester during their tenure in the program.

Admission to the special offerings of these programs will be competitive, using the same procedures and standards that are in place for students applying to the St. John's campus program(s).

Subject to approval by the Committee on Graduate Studies for the School of Social Work, students admitted to an out-of-province program offering may apply to transfer to the equivalent program on the St. John's campus. In such instances, the fee structure under which the student was admitted will not change. Subject to approval by the Committee on Graduate Studies for the School of Social Work, students admitted to a St. John's based program may apply to transfer to the equivalent out-of-province program. In these instances, students transferring from the St. John's based program offerings to an equivalent out-of-province offering will be required to pay a pro-rated one-time fee upon formal transfer to the special offering.

### 23.1 Qualifications for Admission

1. Admission is limited, selective and competitive.
2. To be considered for admission an applicant shall hold a Bachelor of Social Work degree from an institution recognized by the Senate, with at least second class standing, and an average of at least Grade B in the last 60 undergraduate credit hours, or an equivalent professional undergraduate degree in social work approved by the Graduate Studies Committee of the School of Social Work for recommendation to the Dean.
3. In addition to the stated academic requirements, the applicant must have completed, subsequent to obtaining the BSW degree, at least two years employment in professional social work practice or in a comparable human service discipline or activity. Extensive relevant experience prior to undergraduate degree work may be recognized in full or partial fulfillment of this requirement.

## 23.2 Procedure for Admission

1. Applicants must submit an application for admission with supporting documentation to the School of Graduate Studies. The supporting documentation will consist of: an official transcript of the applicant's previous academic record submitted directly from the institution(s) attended; a statement of previous professional employment, a list of any published or unpublished works, and a declaration of program emphasis and educational objectives; and three letters of appraisal, to be submitted by three referees capable of assessing the applicant's previous academic and/or practice performance. Letters of appraisal are to be submitted directly to the School of Graduate Studies.
2. The Graduate Studies Committee of the School of Social Work may require the applicant to appear for a personal interview with a faculty member or members.
3. A student who meets the basic admission requirements under **Qualifications for Admission**, 2 and 3 above may, space permitting, take no more than 6 credit hours in Social Work graduate courses without applying for and being admitted to the MSW program. Students wishing to take courses under this provision should submit to the School of Social Work a REQUEST FOR PERMISSION TO REGISTER IN A GRADUATE COURSE with evidence of BSW graduation, and apply or reapply for admission to Memorial University of Newfoundland as an undergraduate at least six weeks before the beginning of the semester in which the class is to be taken.
4. A person who has completed an MSW degree is eligible to register in any MSW course offering, space permitting.
5. Qualified students admitted to other graduate programs may, space permitting, apply to take Social Work graduate courses 6011, 6412, 6422, 6332 and graduate social work electives. Students wishing to take courses under this provision should submit a REQUEST FOR PERMISSION TO REGISTER IN A GRADUATE COURSE, academic transcripts and a brief professional resume to the Graduate Officer in the School of Social Work.

## 23.3 Program of Study and Research

1. A candidate's program will be developed cooperatively by the candidate and a faculty advisor designated for this purpose by the Director of the School. The faculty advisor shall counsel the candidate on course selection.
2. Specified supplementary studies may be required to ensure requisite knowledge pertinent to the specialization.
3. A candidate electing a thesis program shall be assigned a supervisor by the Director in consultation with the student. It is recommended that a thesis supervisor be assigned as early in the program as possible. The thesis supervisor, when assigned, shall normally assume the duties of faculty advisor under 1. above.
4. Candidates admitted to the MSW Program in Advanced Clinical Practice thesis route must complete a thesis and a minimum of 21 credit hours consisting of 6011, 6312, 6322, 6332, 6412, 6422 and 6912 (Internship). In addition to these courses, non-thesis candidates must also complete 6432, 6442 and a 3 credit hour graduate elective in social work or a related discipline as requested by the candidate and approved by the graduate advisor. Candidates in either route may be required to take additional courses.

## 23.4 Internship

Each MSW student is required to complete an advanced clinical internship that is to be conducted in a setting and supervised by a field instructor approved by the School of Social Work. The graduate field coordinator is responsible for facilitating appropriate matches between the student, field instructor, and field internship setting. Acceptable field instructors must have as a minimum qualification a MSW degree. Although consideration will be given to all factors affecting the location and type of social work internships, final approval of an internship rests with the School of Social Work. The School cannot guarantee the availability of MSW field instruction in all communities and at all times.

Students are responsible for their own financial support during the internship. Part-time internships of two semesters will require approval from the proposed agency field instructor and the graduate field coordinator.

At least four months prior to the commencement of the semester in which they intend to begin 6912, the 500 hour field internship, all candidates shall submit a completed Field Internship Planning Information Form. At least six weeks before the internship commences, students shall submit a Social Work Field Internship Proposal. Evaluation of the internship in Advanced Clinical Practice will be on a PASS/FAIL basis.

Candidates who voluntarily withdraw from the social work internship without prior approval of the graduate field coordinator and the chair of the Graduate Studies Committee, or who conduct themselves in such a manner as to cause the agency and the field coordinator to terminate the placement, will normally be awarded a grade of Fail in the internship course.

Candidates who voluntarily withdraw from the field internship with the prior approval of the graduate field coordinator and the chair of the Graduate Studies Committee cannot be guaranteed a second internship during that semester. In this case, the candidate will be awarded a grade of Incomplete for the internship course. The candidate shall normally complete an internship the following semester.

## 23.5 Course Format

To increase accessibility for students in remote and rural practice, we offer courses in the following formats:

1. 6011, 6412, 6422, and social work electives will be offered by distance delivery; that is, not in a regular classroom format.
2. 6312, 6322 and 6332: By residential institute consisting of 36 hours of condensed classroom instruction. These courses also include home-study and teleconference and/or internet components scheduled prior to and/or following the institute. Students must be available on a full-time basis to attend classes and complete assignments and group projects during the institute portion of these courses. It is recommended that students take leave from their employment for the duration of a residential institute which may be scheduled in a combination of weekday, evening and weekend hours within a two and a half week time period. The final decision regarding the residential institute schedule rests with the School of Social Work.
3. 6912, Advanced Clinical Practice Internship and 6432 Research Internship can be completed in St. John's, or in a student's home community where appropriate supervision is available.
4. 6442, Colloquium Presentation, may be conducted in St. John's or in a student's home community, provided suitable audio-visual facilities are available.
5. In exceptional circumstances, and contingent upon student numbers and school resources, additional course sections may be offered in a regular classroom format.

## 23.6 Period of Study

For students admitted to the program outlined in 23.3.4. above:

1. For the candidate in part-time enrolment, the program of study is designed to permit completion of all degree requirements within nine semesters or three calendar years.
2. For the candidate in full-time enrolment non-thesis route, the program of study is designed to permit completion of all degree requirements within three semesters or one calendar year, as follows.

Fall semester: 6011, 6312(institute), 6412  
 Winter semester: 6322(institute), 6422, Elective  
 Spring semester: 6432, 6442, 6332 (institute), 6912

## 23.7 Evaluation

1. Failure to attain a final passing grade of A or B in a program course, or *PASS in a PASS/FAIL course*, shall lead to termination of the student's program, unless a re-read has been requested. Failure to obtain the required grades as stated above in the re-read shall lead to termination of the student's program.
2. When the Director has determined, on the basis of consultation with the candidate, the advisor, or supervisor, and the instructors, that a candidate's work has fallen below a satisfactory level, the Director may recommend to the Dean of Graduate Studies that the candidate be required to withdraw from the program.
3. To remain in good standing students are required to maintain professional behaviour consistent with the current Code of Ethics of the Canadian Association of the Social Workers. Students who fail to meet this requirement will be required to withdraw from the School upon the recommendation of the Graduate Studies Committee.

## 23.8 Thesis

See General Regulation **Theses and Reports**.

Note: Every candidate shall comply with the **General Regulations** governing the School of Graduate Studies and the MSW Degree Regulations.

### Courses

A selection of the following graduate courses will be offered to meet the requirements of candidates, as far as the resources of the School will allow.

#### Core Courses

- 6011 Critical Thinking and Ethical Evaluation for Assessment and Intervention (3 credit hours) (Not required by students who have successfully completed 6010)  
 6312 Crisis Intervention, Brief and Integrated Therapies for Diverse Individuals (3 credit hours) (Prerequisite/Co-requisite 6011 or the former 6010) (Not required by students who have successfully completed 6311)  
 6322 Family Therapy: Promotion of Strengths and Prevention of Violence in Diverse Families (3 credit hours) (Prerequisite 6011 or the former 6010) (Not required by students who have successfully completed 6321)  
 6332 Social Work Perspectives in Interdisciplinary Team Development and Group Therapy (3 credit hours) (Prerequisite 6011 or the former 6010) (Not required by students who have successfully completed 6331)  
 6412 Research Design for Social Work Assessment and Evaluation (3 credit hours) (Not required by students who have successfully completed 6411)  
 6422 Data Analysis for Social Work Assessment and Evaluation (3 credit hours) (Prerequisite 6412 or the former 6411)  
 6432 Research Internship (2 credit hours) (Prerequisite 6412 or the former 6411 and 6422)  
 6442 Colloquium Presentation Integrating Theory and Research in Advanced Clinical Practice (1 credit hour) (Prerequisite/Co-requisite 6912, 6432)  
 6912 Advanced Clinical Practice Internship (3 credit hours) (Prerequisites 6312 or the former 6311; 6322 or the former 6321; and Prerequisite/Co-requisite 6332 or the former 6331)

#### Electives (3 credit hours)

- 6230 Seminar in Community Development  
 6530 Seminar in Social Administration: Evaluation of Policies and Programs  
 6540 Supervision in Professional and Clinical Practice  
 6550 Feminist Therapy in Social Work Practice  
 6820-29 Individual Reading and Research in Special Areas  
 Although the School does not currently offer a program in Social Policy and Administration, it has faculty expertise in these areas and may, resources permitting and given sufficient student interest, offer the following elective courses:  
 6210 Seminar in Social Planning and Social Development  
 6220 Seminar in Organization Development  
 6510 Seminar in Social Administration: Social Policy Analysis, Development and Administration  
 6520 Seminar in Social Administration: Program Design and Development

## 24 Regulations Governing the Degree of Master of Women's Studies

### Associate Professor and Coordinator

J. Guthrie

The degree of Master of Women's Studies is designed for students from any discipline who have an appropriate background in Women's Studies. The objectives of the program are:

to provide students with advanced courses in a broad range of Women's Studies specialties and particularly in Women's Studies theories and methods; to equip students with the practical, theoretical and methodological skills to carry out independent research at the master's level; and to foster interdisciplinary approaches to the study of women.

The program is administered by the Women's Studies Graduate Committee, the members of which are appointed by the Dean of Arts on the advice of the Women's Studies Council. The members of the Graduate Committee are drawn from faculty teaching in the Women's Studies Program.

The Graduate Coordinator, on behalf of the Women's Studies Graduate Committee, makes recommendations to the Dean of Graduate Studies concerning admission, and financial support for students, and administers all other matters pertaining to the graduate program.

### 24.1 Master of Women's Studies Degree

The degree of Master of Women's Studies is offered by full- or part-time study. Candidates may choose a thesis or non-thesis (project or internship) program. The program draws scholarly participation from faculty members in a range of academic disciplines within the

School of Graduate Studies.

## 24.2 Qualifications for Admission

1. Admission is limited and competitive. To be considered for admission, an applicant will normally hold an honours degree or equivalent, and will have a breadth of knowledge in Women's Studies satisfactory to the Women's Studies Graduate Committee.
2. Applicants who do not have an adequate background in Women's Studies may be required to complete Women's Studies 4000 or equivalent normally with a grade of 75% or higher.

## 24.3 Program of Study

1. Upon admission each graduate student on the thesis program will be assigned two supervisors from different disciplinary units. For students selecting the non-thesis option, one supervisor will be assigned.
2. All candidates are required to complete Women's Studies 6000, 6100, 6200, and 6300.
3. Three to 9 additional elective credit hours approved by the Women's Studies Graduate Committee and the student's supervisor(s) will be required. These elective credit hours will comprise courses selected from graduate courses in cognate academic units, and/or Women's Studies 6380, 6500, and/or from the block of special topics courses in Women's Studies WSTD 6400-6409.
4. Each student will be required to give a public seminar on her/his thesis research, project, or internship before submission of her/his work.

## 24.4 Thesis

1. Candidates for the degree of Master of Women's Studies (thesis option) will be required to complete a minimum of 15 credit hours. Candidates will also be required to complete a thesis.
2. A thesis proposal, approved by the student's supervisors, will be presented to the Women's Studies Graduate Committee for its approval. The thesis proposal must normally be approved by the Women's Studies Graduate Committee no later than the end of the candidate's third semester in the program.
3. The thesis will be evaluated in accordance with the procedures outlined in General Regulation **Theses and Reports** of the School of Graduate Studies.

## 24.5 Project

1. Candidates for the degree of Master of Women's Studies (project option) will be required to complete a minimum of 18 credit hours. Candidates will also be required to complete a project.
2. The Master's project, must be interdisciplinary in nature and aimed at linking theoretical and practical knowledge: by recognizing and articulating a problem to which Women's Studies knowledge can be applied; by developing and justifying practical approaches which seek to resolve the problem; and by creating a product that could be implemented in the community. The project report should consist of the project (e.g., a CD-ROM; a computer project; a manual or guidebook; a kit of learning resources; photographs; audio or videotape, etc.) as well as a literature-based rationale, theoretical basis and justification for its use. The length of the written portion of the project should be 50-70 pages. Regardless of the form that the project takes (e.g., a CD-ROM; a computer program; a manual or guidebook; a kit of learning resources; photographs; audio or videotape, etc.), there must be a written project report.
3. A project proposal, approved by the student's supervisor, will be presented to the Women's Studies Graduate Committee for its approval. The project proposal must normally be approved by the Women's Studies Graduate Committee no later than the end of the candidate's third semester in the program.
4. The project will be evaluated in accordance with procedures outlined in General Regulation **Theses and Reports** of the School of Graduate Studies.

## 24.6 Internship

1. Candidates for the degree of Master of Women's Studies (internship option) will complete a minimum of 18 credit hours. Candidates will also be required to complete an internship.
2. Internship placements shall be for one semester. Part-time internships of two semesters will require approval from the proposed agency or institution and the Women's Studies Graduate Studies Committee.
3. Students, in consultation with their supervisor and the Women's Studies Graduate Coordinator, will explore internship options and locate an eligible person to provide field instruction during their internship. Although consideration will be given to all factors affecting the location and type of all Women's Studies internships, the final decision regarding internship rests with the Women's Studies Program and the Dean of Graduate Studies.
4. Factors affecting the type and location of the internship include: the number of immersion hours per week; the extent to which the intern takes up a trainee, supervisory and/or research role and whether the intern would be working directly or indirectly with clients of the agency or institution.
5. Each internship shall be supervised by a Supervisory Committee of at least three members, including the candidate's supervisor, the field supervisor, and Women's Studies Graduate Coordinator or her/his delegate.
6. The Supervisory Committee will meet with the intern and field instructor at least once during the internship period to make an assessment of the nature and quality of the intern's progress, and to approve any modifications to the internship.
7. The internship proposal, approved by the student's supervisors, will be presented to the Women's Studies Graduate Committee for its approval. The proposal must normally be approved by the Women's Studies Graduate Committee no later than the end of the candidate's third semester in the program.
8. Regardless of the form that the internship takes, there must be a written internship report (35-50 pages). When the candidate completes the internship report, the Supervisory Committee will recommend to the Dean of Graduate Studies a grade of pass or fail. A candidate will be permitted to submit an internship report only after the Committee has determined that the internship placement has been fully completed.
9. Should the Women's Studies Coordinator, on the recommendation of the Supervisory Committee, terminate the internship prior to its completion, it may recommend to the Dean of Graduate Studies one of the following:
  - a. submission of a new internship proposal for a different field setting (once only);
  - b. selection of the thesis or project option;



- c. termination of the student's program.

#### Courses

6000 Feminist Theory  
 6100 Epistemological and Methodological Approaches to Women's Studies  
 6200 Graduate Seminar in Women's Studies  
 6300 Feminism as Community  
 6380 Women, Nature, Science and Technology (Cross listed as Sociology 6380)  
 6400-6409 Special Topics in Women's Studies  
 6500 Women and Communication Studies

## 25 Regulations Governing the Degree of Doctor of Philosophy and Specific Program Regulations

Note: *In this and following regulations and notes, "Head" and "Department" shall be understood to mean "Dean or Director" and "Faculty or School" respectively, applying the regulations to a Faculty or School in which there are no departmental divisions.*

Students should consult the General Information and Regulations Governing All Graduate Students for information concerning the Degree of Doctor of Philosophy. For information concerning the number of courses required for specific programs, students should consult the following listing for the appropriate department.

Tuition leading to the degree of Doctor of Philosophy is offered in selected areas in Anthropology, Biochemistry, Biology, Chemistry, Cognitive and Behavioural Ecology, Computer Science, Earth Sciences (Geology), Earth Sciences (Geophysics), Education, Engineering, English Language and Literature, Ethnomusicology, Experimental Psychology, Folklore, Food Science, Geography, History, Linguistics, Marine Biology, Mathematics, Medicine, Pharmacy, Physical Oceanography, Physics, Social Work, Sociology, and Statistics.

### 25.1 Anthropology

#### Associate Professor and Head of the Department

W. Fife

1. The Ph.D. in Anthropology is offered in a) prehistoric and historic archaeology of Northeastern North America and the Arctic and b) historical anthropology and ethnography of Newfoundland and Labrador, and Western Europe.
2. An applicant must normally hold a Master's degree with a specialization in archaeology or social and cultural anthropology. In exceptional circumstances, a student who has spent three semesters in the M.A. program may be recommended for transfer into the Ph.D. stream.
3. Residency: the Department requires a minimum residency of two years for Ph.D. students.
4. A supervisory committee will be established for each student as per General Regulation **Supervision, Ph.D. Candidate, 2.**
5. Program of study:
  - a. Students will normally be required to successfully complete two courses during their first three semesters in the program.
    - i. Archaeology: 6700, 6411
    - ii. Social/Cultural: 6300, 6890
  - b. The supervisory committee may require the candidates to complete additional graduate courses.
6. All candidates must demonstrate a reading knowledge of a second language to be determined in consultation with the supervisory committee. This language will normally be a language in which there is a substantial body of literature in either Archaeology or Social and Cultural Anthropology. It could also be a field language pertinent to the candidate's project. The exam will be set and marked by an authority determined by the Head of the Department and the Dean of Graduate Studies (see **General Regulation Evaluation, Evaluation of Graduate Students, 4.** and will normally be completed before the Comprehensive Examination is undertaken.
7. The Ph.D. Comprehensive Examination shall be administered in accordance with General Regulation **Comprehensive Examinations**. The examination may be oral, written or both, and shall consist normally of three sessions, each of up to three hours duration, within a one week period, or three (3) one week take home examinations. Candidates will prepare for these examinations by undertaking supervised readings in three fields prescribed by the three members of the comprehensive exam committee. The examination will deal with specified areas of either archaeology or social/cultural anthropology. The examination will normally be scheduled in the third week of November each year in the second year of the candidate's program.
8. The candidate must submit a written thesis proposal for presentation to the department two months following completion of his/her comprehensive examination.
9. As stated in the **General Regulations** for Graduate Studies, the time limit for completion of the degree is 7 years.
10. Submission of dissertation and the oral defence of dissertation will follow General Regulation **Theses and Reports, Evaluation of Ph.D. Theses**.

#### Courses

##### Archaeology/Physical Anthropology Courses (A/P)

6020 Physical Anthropology  
 6040 Human Osteology  
 6095 Advanced Studies in Ethnohistory (same as History 6095)  
 6151 Palaeoethnobotany  
 6181 Palaeoeskimo Cultures of the Eastern Arctic  
 6182 Advances in Material Culture Analysis  
 6187 Readings in Maritime Provinces Prehistory  
 6189 Palaeopathology  
 6191 Approaches to Early Modern Material Culture  
 6192 Conservation Method and Theory  
 6290 Newfoundland and Labrador Prehistory  
 6310 Economic Analyses in Archaeology  
 6320 Ethnoarchaeology  
 6330 Archaeological Field Conservation  
 6409 History of Archaeology

6411 Theory and Method in the Study of Archaeology and Prehistory  
 6500 Special Topics in Historical Archaeology (Prerequisite 6191)  
 6680-6699 Special Topics in Archaeology and Prehistory  
 6700 Interpretative Methods in Archaeology  
 6890 Graduate Seminar

### **Social/Cultural Anthropology Courses (S/C)**

6010 Cultural Ecology  
 6071 Health and Illness: Cultural Contexts and Constructions  
 6081 Anthropology of Gender  
 6089 Anthropology of Underclass Life  
 6100 Social Organization  
 6110 Culture and Personality  
 6140 The Community  
 6210 Language and Culture  
 6240 Atlantic Regional Studies  
 6260 Social and Economic Development  
 6280 Newfoundland Ethnography  
 6281 Labrador Ethnography  
 6282 Ethnography of a Single Region  
 6300 Fieldwork and Interpretation of Culture  
 6400 Current Themes in Cultural Anthropology  
 6410 History of Anthropology  
 6412 Anthropological Theory  
 6413 Applied Anthropology  
 6430 Audiovisual Anthropology  
 6440 Master's Research Paper (9 credit hours)  
 6580-6599 Special Areas in Anthropology  
 6600 Contemporary Debates in Anthropology  
 6890 Graduate Seminar

## **25.2 Biochemistry**

### **Professor and Head of the Department**

M. Mulligan

1. The degree of Doctor of Philosophy is offered in Biochemistry or Food Science to full-time and part-time students.
2. The admission requirements for the graduate programs in Biochemistry and Food Science are as given under **General Regulations**. Depending on the background and/or area of specialization, a candidate's program may include additional courses taken for credit in Biochemistry, Food Science or related subjects.
3. The program of a candidate for the Ph.D. degree shall be the responsibility of the supervisory committee, composed of the Supervisor and at least two other faculty members recommended with the concurrence of the Supervisor by the Head.
4. It is the responsibility of the student to arrange regular meetings with their graduate supervisory committee. An annual report, prepared by the Supervisor and signed by all members of the supervisory committee, is required to be given to the Head.
5. All candidates for the Ph.D. degree shall be required to attend and participate in Departmental seminars.
6. A candidate for the Ph.D. will be required to present a seminar on his/her research area within 18 months of starting the program and again immediately prior to the submission of thesis.

### **Additional Regulations for Each Program**

#### **Biochemistry (Additional)**

7. A candidate for the Ph.D. in Biochemistry shall take the Comprehensive Examination normally within the first 6 months of his or her program and under no circumstances later than the first anniversary of enrolment in the doctoral program. The examination will be both written and oral. Students will be examined on their general knowledge in Biochemistry as well as in the area of their research specialization. Failure of this examination will result in the termination of the candidate's program.

#### **Food Science (Additional)**

8. A candidate for the Ph.D. degree in Food Science shall be required to take the comprehensive examination normally within three semesters of his/her enrolment in the doctoral program and under no circumstances later than six semesters. The examination shall consist of two parts:
  - a. A written examination covering the following areas of food science.
    - Food Chemistry
    - Food Processing
    - Food Microbiology and Biotechnology
    - Biochemical and Food Engineering
    - Food Analysis
    - Nutrition Fundamentals
  - b. The candidate shall be required to defend orally an assigned research topic that may be related to his/her area of concentration. The candidate shall be required to provide a written submission of the research topic to the examination committee at least three weeks before the date of the oral examination. The comprehensive examination committee shall examine the candidate orally on any or all aspect(s) of the research topic and the written examination.
  - c. In order to pass the comprehensive examination, the candidate is required to pass both the written and oral segments.

### **Courses**

A series of advanced courses in the areas outlined below will be offered. Normally only one course will be offered per semester.

6200 Current Biochemical Research Topics I  
 6210 Current Biochemical Research Topics II  
 6400 Control of Intermediary Metabolism  
 6410 Molecular Endocrinology  
 6420 DNA: The Structure and Function of Genes (Prerequisite: An introductory course in molecular biology, or its equivalent, at the senior undergraduate level, e.g. Biochemistry 4100)

- 6421 RNA: Structure, Function and Synthesis (Prerequisite: An introductory course in molecular biology, or its equivalent, at the senior undergraduate level, e.g. Biochemistry 4100)
- 6422 Regulation of Protein Synthesis (Prerequisite: An introductory course in molecular biology, or its equivalent, at the senior undergraduate level, e.g. Biochemistry 4100)
- 6430 Bioenergetics
- 6440 Membranes
- 6450 Proteins
- 6500 Enzymology
- 6520 Nutritional Biochemistry
- 6530 Food Biochemistry
- 6590 Molecular Biology I (Cross listed as Biology 6590 and Medicine 6590) Prerequisites: Biology 4241, Biochemistry 4100 (or equivalent)
- 6591 Molecular Biology II (Cross listed as Biology 6591 and Medicine 6591) Prerequisites: Biology 4241, Biochemistry 4100 (or equivalent)
- 6592 Bacterial Genetics (Cross listed as Biology 6592) Prerequisite: Biology 4241 or Biochemistry 4100 (or equivalent)
- 6593 Selected Readings in Molecular Biology (Cross listed as Biology 6593) Prerequisites or Co-requisites: Biology 6590, 6591/Biochemistry 6590, 6591/Medicine 6590, 6591 (or equivalent)
- 6600 Metabolic Toxicology
- 6610 Comparative Biochemistry
- 6620 Biochemical Adaptation
- 6630 Marine Biochemistry
- 6640 Biochemistry of Cancer
- 6650 Science and Technology of Seafoods
- 6660 Industrial Microbiology
- 6670 Biological Waste Treatment
- 6680 Processing and Quality of Foods

## 25.3 Biology

### Professor and Interim Head of the Department

M. Colbo

The degree of Doctor of Philosophy is offered in Biology to full-time and part-time students in Biology and Marine Biology. Students interested in animal behaviour should also consult the section in the Calendar describing the Doctoral programs in Cognitive and Behavioural Ecology.

### 25.3.1 Biology

1. Admission to a Ph.D. program in Biology shall not normally take place until after the completion of the course requirements and the submission of the thesis for the M.Sc. degree. However, on the recommendation of the Department, this requirement may be waived by the Dean of Graduate Studies.
2. The program of a candidate shall be the responsibility of a Supervisory Committee composed of the Supervisor and at least two other appropriate members recommended to the Dean by the Head (or delegate) of the Department with the concurrence of the Supervisor.
3. The Supervisory Committee shall interview the student normally within a month of first registration, to discuss the student's program and to explore any areas of weakness in the candidate's biological knowledge, especially where these relate to the intended areas of research. The Supervisory Committee will recommend a student's subdiscipline within Biology to the Department in writing after this meeting.
4. It is the function of a Supervisory Committee to have regular meetings, at least annually, with its graduate student. A meeting report, signed by all members of the Supervisory Committee and student, must be given to the Department. A copy will be sent to the graduate student and to the Dean of Graduate Studies.
5. The candidate will present a tentative outline of the proposed research to the Supervisory Committee, with a copy to the Department by the end of the second semester, and preferably prior to commencement of the research.
6. The student will present a research seminar to the Department, normally by the end of the second semester following admission, to describe the research topic being investigated and the methodologies to be employed. This seminar provides an opportunity for the student to receive constructive input from the broad biological community.
7. When the Supervisory Committee deems it necessary, a working knowledge of a language other than English may be required.
8. Comprehensive Examination
  - a. Timing of Examination
    - i. Timing of the comprehensive examination shall follow General Regulation, 1. under **Comprehensive Examination, Ph.D Comprehensive Examination** governing the degree of Doctor of Philosophy. A candidate registered in a full-time Ph.D. program in the Faculty of Science, Department of Biology shall normally take the comprehensive examination during the first year of the program, and no later than one year after completion of the prescribed courses.
    - ii. The procedure shall be initiated by the candidate's Supervisor who will notify the Department of Biology, in writing, of the candidate's readiness. Failure to meet the above requirement can result in the candidate being required to withdraw from the program.
  - b. Examination Committee
 

The Examination Committee shall be appointed by the Dean of Graduate Studies on the recommendation of the Department of Biology according to Regulation **Comprehensive Examinations, Ph.D. Comprehensive Examination**, 2. of the **General Regulations** of the School of Graduate Studies. No more than two members of the Examination Committee may be members of the candidate's Supervisory Committee. The committee shall meet and recommend to the Department in writing an examination seminar topic within the student's previously determined subdiscipline.
  - c. Examination Procedure
 

The Department shall provide the student the examination date and the seminar topic in writing not more than six nor less than four weeks prior to the examination. The student shall provide each member of the Examination Committee a written paper on the seminar topic one week prior to the examination. The Examination Committee shall evaluate the candidate's presentation and response to questions put to him/her during the Oral Examination both on the seminar and within the student's subdiscipline

of Biology.

d. Subsequent Action

The Examination Committee will meet in camera to arrive at its conclusions. The Chair shall report the results of the Examination to the Head and the Dean of Graduate Studies for transmission to the candidate. The report will include one of the following decisions: a) the student passed with distinction, passed or failed. b) if failed and it is the first examination whether the student may be re-examined.

e. Re-examination

Comprehensive Re-examination if permitted will occur not sooner than one month and not more than six months after the first. The candidate and his or her Supervisory Committee shall be informed of the deficiencies found. The format for the second examination will be determined by the Examination Committee with the approval of the Biology Graduate Studies Committee. The candidate will be informed of the topic and format four to six weeks prior to the examination. The examination will follow the procedure outlined in 8.c & d above. A failure will require the student to withdraw from the program.

9. Theses shall conform to **Theses and Reports** of the **General Regulations** of the School of Graduate Studies and the Departmental Guidelines.

### 25.3.2 Marine Biology

1. A program of study leading to a Doctor of Philosophy with a specialization in Marine Biology is governed by the above regulations.
2. To be considered for admission, applicants must have a background equivalent to that provided by the M.Sc. specialization in Marine Biology.
3. Normally students will be required to take 6 credit hours in Biology courses from the following group: 6710, 7531, 7535, 7540, 7541, 7551, 7560 and 7561.
4. Depending on the student's area of research and background additional courses may be required.

#### Courses

A selection of the following graduate courses will be offered to meet the requirements of candidates, as far as the resources of the Department will allow:

6000 Research Topics in Microbiology  
 6100 Modern Problems in Botany  
 6110 Advanced Phycology  
 6120 Mycology  
 6350 Behavioural Ontogeny (Cross-listed as Psychology 6350)  
 6351 Behavioural Ecology and Sociobiology (Cross-listed as Psychology 6351)  
 6355 Field Course in Animal Behaviour (Cross-listed as Psychology 6355)  
 6400 Parasitic Protozoology  
 6410 Helminthology  
 6420 Parasitic Arthropods  
 6590 Molecular Biology I (Cross-listed as Biochemistry 6590 and Medicine 6590) Prerequisites: Biology 4241, Biochemistry 4100 (or equivalent)  
 6591 Molecular Biology II (Cross-listed as Biochemistry 6591 and Medicine 6591) Prerequisites: Biology 4241, Biochemistry 4100 (or equivalent)  
 6592 Bacterial Genetics (Cross-listed as Biochemistry 6592) Prerequisite: Biology 4241 or Biochemistry 4100 (or equivalent)  
 6593 Selected Readings in Molecular Biology (Cross-listed as Biochemistry 6593) Prerequisites or Co-requisites: Biology 6590, 6591/ Biochemistry 6590, 6591/Medicine 6590, 6591, (or equivalent)  
 6700 Biology of the Molluscs  
 6710 Marine Benthic Biology  
 6900 Entomology  
 6910 Applied Entomology  
 7110 Cellular Physiology and Cytology  
 7140 Physiology of Parasitism  
 7210 Arctic and Subarctic Biology  
 7220 Quantitative Methods in Biology  
 7250 Topics in Wildlife Biology  
 7270 Ecology of Newfoundland  
 7300 Ornithology  
 7510 Ichthyology  
 7520 Advances in Fish Biology  
 7530 The Molecular Basis of Development  
 7531 Biological Oceanography  
 7535 Research Methods in Marine Science  
 7540 Plankton Dynamics  
 7541 Physiological Ecology of Phytoplankton  
 7550 Fishery Biology  
 7551 Fisheries Resource Management  
 7560 Physiology of Marine Invertebrates  
 7561 Physiology of Marine Vertebrates  
 7570 Marine Benthic Biology  
 7600 Effect of Organic and Inorganic Pollutants on Biological Systems  
 7910 Community and Ecosystem Ecology  
 7920-7940 Special Topics in Biology

### 25.4 Chemistry

#### Associate Professor and Head of the Department

R. Davis

The degree of Doctor of Philosophy in Chemistry is offered as full-time or part-time study.

A Master's degree in Chemistry or related area from a recognized university is normally required for entry into the Ph.D. program. Students holding a Bachelor's degree (Honours or equivalent) in Chemistry may be considered for direct admission into the Ph.D.

program. Students currently registered in the Memorial University of Newfoundland's Chemistry M.Sc. program for a minimum of three semesters may request transfer into a Ph.D. program. The transfer should be supported by the Supervisor and the Supervisory Committee and subsequent to satisfactory presentation of a written progress report and Ph.D. research proposal.

1. Candidates are normally required to write American Chemical Society (ACS) placement test(s) in the first two weeks of the initial semester of registration in order to determine an appropriate course program.
2. Candidates will be assigned a Supervisory Committee consisting of the Supervisor and at least two other appropriate faculty members appointed by the Dean on recommendation of the Chemistry Deputy Head (Graduate Studies).
3. The program of a candidate must be arranged by the Supervisor in consultation with the Supervisory Committee and the student before the second semester of registration. It is the responsibility of the Supervisory Committee to meet at least annually with the student, to provide guidance at all stages of the candidate's program, and, in consultation with the student, to prepare annual written progress reports for submission to the Dean of Graduate Studies.
4. Candidates holding a Master's degree from a recognized university are normally required to successfully complete a minimum of 6 credit hours of graduate Chemistry courses with a minimum grade of B and to present a departmental seminar on a topic not directly related to the candidate's research (Chemistry 6002) as well as a seminar describing the candidate's research (Chemistry 6003). Courses taken towards a Master's degree may not be repeated. Candidates not holding a Master's degree must successfully complete at least 12 credit hours of graduate Chemistry courses with a minimum grade of B in addition to Chemistry 6002 and 6003.
5. Candidates are required to attend Departmental seminars.
6. Candidates must pass a comprehensive examination, as described in the **General Regulations**, consisting of a three-hour written part covering topics in a chosen branch of Chemistry and, subsequent to the written exam at the discretion of the comprehensive examination committee, an oral exam designed to explore areas of perceived deficiency.
7. Candidates must submit and successfully defend a thesis deemed acceptable by two internal and one external examiner as outlined in the **General Regulations**.

#### Courses

6002 Doctoral Seminar  
 6003 Doctoral Research Seminar  
 6110 Analytical Chemistry II  
 6150 Advanced Spectroscopic Techniques  
 6151 Analytical Separations and Organic Mass Spectrometry  
 6152 Electroanalytical Techniques  
 6153 Techniques in Sampling, Trace Analysis and Chemometrics  
 6154 Business Management and Good Laboratory Practice  
 6155 Computers in Instrumental Analysis and Basic Electronics (Same as Med 6070)  
 6160 Laboratory Projects in Sampling, Electroanalysis and Trace Analysis  
 6161 Laboratory Projects in Analytical Separations and Spectroscopic Techniques  
 6190-9 Selected Topics in Analytical Chemistry  
 6201 Bioinorganic Chemistry  
 6202 Main Group Chemistry  
 6204 Mechanisms in Catalysis  
 6205 Photochemistry of Transition Metal Complexes  
 6210 Organometallic Chemistry  
 6290-9 Selected Topics in Inorganic Chemistry  
 6300 Quantum Chemistry I  
 6301 Quantum Chemistry II  
 6302 Molecular Spectroscopy  
 6310 Electronic Structure Theory  
 6323 Chemical Thermodynamics I  
 6324 Chemical Thermodynamics II  
 6350 Electrochemical Kinetics  
 6360 Solid State Chemistry  
 6380 Adsorption on Surfaces  
 6390-9 Selected Topics in Physical Chemistry  
 6401 Organic Spectroscopic Analysis I  
 6402 Organic Spectroscopic Analysis II  
 6421 Natural Products Chemistry  
 6460 Organic Synthesis  
 6470 Physical Organic Chemistry  
 6490-9 Selected Topics in Organic Chemistry  
 6600 Applications of Inorganic and Organometallic Chemistry to Toxicology

## 25.5 Cognitive and Behavioural Ecology Program

#### Administrative Committee

Dr. Rita Anderson (Psychology)  
 Dr. Edward Miller (Biology)  
 Dr. William Montevecchi (Psychology)  
 Dr. Paul Snelgrove (Biology)  
 Dr. Anne Storey (Psychology) - Chair  
 Dr. Ian Warkentin or Dr. David Brombeck (Grenfell College)  
 One Graduate Student from the Program

### 25.5.1 Program

1. The Cognitive and Behavioural Ecology Graduate Program focuses on interdisciplinary animal behaviour research. Research integrates mechanistic, developmental, evolutionary and ecological perspectives on behaviour through molecular, individual and population levels of analysis. Supervisors include faculty from the Departments of Biology, Psychology and the Ocean Sciences Centre, the Faculty of Medicine and the Environmental Science Program at Sir Wilfred Grenfell College, as well as adjunct faculty from the Canadian Wildlife Service, Department of Fisheries and Oceans, the Newfoundland and Labrador Forestry and Wildlife Divisions and Parks Canada. The Departments of Biology and Psychology jointly offer the Master of Science and the Doctor of

Philosophy degrees in Cognitive and Behavioural Ecology.

- The Administrative Committee is responsible for the Program. Committee members are appointed by the Dean of Science, on the recommendation of the Chair of the Committee and of the Heads of Biology and Psychology. The Committee chair is elected by the committee members and appointed by the Dean of Science. The Committee makes recommendations to the Dean of Graduate Studies concerning admissions and academic requirements. In consultation with supervisors, recommendations are made concerning course programs, financial support, thesis committees, comprehensive and thesis topics and examiners, students' annual progress. Upon program completion, the Committee certifies that all requirements for the appropriate degree have been met. The department of the supervisor ensures that adequate facilities are provided for each candidate. Students in Cognitive and Behavioural Ecology are considered for teaching assistantships in the Psychology or Biology Departments.

### 25.5.2 Regulations - Doctor of Philosophy

- There are no required courses for the doctoral program. However, the Doctoral Seminar (Biopsychology 6992) and/or other courses tailored for individual students may be included in the student's program by the Dean of Graduate Studies on the recommendation of the Chair of the Committee.
- The comprehensive examination should be taken during the first year of the program. An Examination Committee will be struck in accordance with **General Regulations**. At least one member of the Department of Biology and of the Department of Psychology (other than the Supervisor) must be on the Examination Committee. The candidate's Supervisor will be on the Examination Committee and will be the only examiner from the candidate's Thesis Supervisory Committee. The Head of the Department of the Supervisor of his/her delegate is invited to serve on the Comprehensive Examination Committee. The Examination Committee is chaired by the Chair of the Cognitive and Behavioural Ecology Committee. The examination will include a comprehensive, integrative review paper on a research topic in Animal Behaviour. The review topic is assigned by the Examination Committee, which also determines the submission date for the paper, and the date of the examination. Normally, the student will write the paper in four months, and the oral examination will occur within six weeks of the paper's submission. This paper will form the basis of a public seminar. The Examination Committee will question the candidate about the paper, the topic and its broader relationship with Cognitive and Behavioural Ecology.

#### Courses

Biology 7220 Quantitative Methods in Biology  
 Biopsychology 6240 Special Topics  
 Biopsychology 6350 Behavioural Ontogeny  
 Biopsychology 6351 Behavioural Ecology and Sociobiology  
 Biopsychology 6992 Doctoral Seminar in Cognitive and Behavioural Ecology  
 Biopsychology 7000 Field and Lab Methods in Animal Behaviour and Behavioural Ecology  
 Psychology 6000 Advanced Statistics in Psychology

## 25.6 Computer Science

### Professor and Head of the Department

W. Banzhaf

The degrees of Master of Science and Doctor of Philosophy are offered in Computer Science.

### 25.6.1 Doctor of Philosophy

- Admission into the Ph.D. program in Computer Science is normally restricted to candidates holding a Master's degree (or equivalent) in Computer Science or a closely related area. Others may be considered for admission. See **Qualifications for Admission** of the **General Regulations**. International applicants are strongly encouraged to submit results of the (general) Graduate Record Examination (GRE) Test.
- Each candidate for the Ph.D. shall complete a program of graduate courses prescribed by the supervisory committee. The normal minimum will be 9 credit hours.
- The candidate shall take the Comprehensive Examination within the time limits specified in **Comprehensive Examinations** of the **General Regulations**. Students should consult the departmental guidelines for a detailed description of the content of the Comprehensive Examination.
- The Ph.D. degree program will conclude with an oral defence of the thesis as described in **Theses and Reports** of the **General Regulations**.

#### Courses

A selection of the following graduate courses will be offered to meet the requirements of candidates, as far as the resources of the Department will allow:

#### Programming Languages

6711 Syntax and Semantics of Programming Languages  
 6712 Compiling Techniques  
 6713 Software Engineering  
 6714 Functional Programming  
 6715 Logic Programming  
 6716 Concurrent Programming  
 6718-6719 Special Topics in Programming Languages

#### Computer Systems

6720 Distributed and Parallel Computing  
 6721 Operating Systems Design  
 6722 Advanced Computer Architectures  
 6723 Microprocessor Systems  
 6724 VLSI Design (same as Engineering 9863)  
 6725 Computational Aspects of VLSI (same as Engineering 9864)  
 6726 Modelling and Analysis of Computing Systems  
 6727 Introduction to High Performance Computer Systems  
 6728-6729 Special Topics in Computer Systems - Computer Networks

#### Numerical Computations

6731 Topics in Numerical Methods

6732 Matrix Computations  
6738-6739 Special Topics in Numerical Methods

#### Theoretical Aspects

6741 Advanced Automata Theory  
6742 Theory of Databases  
6743 Complexity of Computational Problems  
6745 Special Topics - Advanced Computational Geometry  
6748-6749 Special Topics in Theoretical Computer Science

#### Applications

6751 Database Technology and Information Retrieval  
6752 Applications of Computer Graphics  
6753 Artificial Intelligence  
6754 Post-Genomic Computational Biology  
6755 Knowledge-Based Systems  
6756 Digital Image Processing  
6758-6769 Special Topics in Computer Applications  
6770-6790 Special Topics in Computer Science

## 25.7 Earth Sciences

### Head of the Department

J. H. Hanchar

The degrees of Master of Science and Doctor of Philosophy are offered in Earth Sciences (Geology) and Earth Sciences (Geophysics) by full-time and part-time study.

### 25.7.1 Doctor of Philosophy

1. Admission into a Ph.D. program in Earth Sciences (Geology) and Earth Sciences (Geophysics) is normally restricted to candidates holding a Master's degree or its equivalent. Candidates holding B.Sc. (Honours) degrees who show evidence of exceptional ability may be considered for a direct entry into a Ph.D. program. In exceptional circumstances, a candidate with a B.Sc. (Honours) degree who has spent not less than 12 months in an M.Sc. degree program may be recommended for transfer into a Ph.D. program, provided that the candidate can demonstrate, to the satisfaction of the Department of Earth Sciences, his/her ability to pursue research at the doctoral level.
2. Prior to the date of first registration in the Ph.D. program, a candidate will meet with his/her Supervisory Committee. The purpose of this meeting is to draw up the candidate's program of study and research.
3. Within two weeks of first registration in the Ph.D. program candidates will normally take the Ph.D. Entry Evaluation. This requirement may be waived by the Dean of Graduate Studies, on the recommendation of the Head, for students who either hold a M.Sc. degree from Memorial University of Newfoundland or have a background that is already deemed satisfactory by the Supervisory Committee.
4. A candidate for the Ph.D. degree is normally required to complete 6 credit hours in addition to the credit hours required for the M.Sc. Degree. The courses must be selected from the overview and general courses below or with the approval of the supervisory committee and Head of Department, other graduate level courses including those offered by other departments. Depending on background and/or area of specialization, a candidate also may be required to complete additional courses in earth sciences or related subjects. All course requirements should be completed within 12 months from the date of the first registration in the Ph.D. program.
5. The Ph.D. Candidacy Examination consists of two parts: The Comprehensive Examination and the Thesis Proposal Examination. The candidate shall normally take these examinations not later than one year from the date of first registration in the Ph.D. program.  
*Note: Detailed descriptions of the Ph.D. Entry Evaluation and the Ph.D. Candidacy Examination are available upon request from the general office of the Department of Earth Sciences.*
6. The Ph.D. degree program will conclude with a thesis examination and an oral defence of thesis as prescribed in the **General Regulations**.
7. The Supervisor and the Head of the Department may recommend to the Dean of Graduate Studies that a candidate who is not making satisfactory progress be required to withdraw from the program.
8. A candidate is required to give an oral presentation to the Department on the results of his/her research. This presentation must be given during the second or third year of the program.

### Courses

A selection of courses will be offered to meet the requirements of candidates as far as the resources of the Department will allow.

#### Overview Courses

7110 Physics of the Solid Earth  
7120 Crustal Geophysics  
7300 Changes in Global Paleoenvironment  
7400 Tectonic Regimes  
7410 Engineering & Environmental Geology  
7500 Chemical Fluxes in the Earth  
7810 Paleocology (same as former 6810. Credit may be obtained for only one of 7810 or 6810)

#### General Courses

6070 Quantitative Techniques in Mineralogy and Metamorphic Petrology  
6141 Rotation of the Earth  
6142 Theory of Global Geodynamics  
6152 Paleomagnetism  
6171 Advanced Exploration Seismology  
6172 Borehole Seismic  
6175 Gravity and Magnetic Methods  
6177 Mathematical Formulations of Seismic Wave Phenomena  
6210 Genesis of Mineral Deposits  
6320 Marine Geology  
6400 Flow and Transport in Fractured Rock

6410 Advanced Engineering and Environmental Geology  
 6420 Deformation Mechanisms  
 6500 Stable Isotope Geochemistry  
 6510 Trace Element Geochemistry  
 6520 Methods in Advanced Research in Geochemistry  
 6540 Radiogenic Isotope Geochemistry  
 6550 Biogeochemistry  
 6600 Petroleum Geology  
 6740 Modern and Ancient Sedimentary Environments  
 6820 Palynology and Paleobotany  
 6990-6999 Special Topics in Earth Sciences

## 25.8 Education

### Professor and Dean

A. Collins

The degrees of Master of Education and Doctor of Philosophy are offered in Education.

The degree of Doctor of Philosophy in Education is offered to qualified candidates, normally by full-time study. The **General Regulations** of the School of Graduate Studies of Memorial University of Newfoundland outlined in the current Calendar, and the Degree Regulations of the Faculty of Education outlined below will apply.

### 25.8.1 Admission to the Ph.D. Program

General qualifications for admission to the Ph.D. Programs at Memorial University of Newfoundland are set out in the University Calendar under School of Graduate Studies, General Regulation **Qualifications for Admission, Ph.D. Program**.

In addition, the following admission requirements apply:

1. an "A" standing in a Master's degree in Education or in an equivalent Master's degree from an accredited university;
2. evidence of scholarly work, such as a master's thesis, directed research project, or qualifying research paper;
3. normally, completion of two years of professional experience in an educational setting.

### 25.8.2 Supervisory Committee

Each candidate will have a supervisory committee comprised of a minimum of three members, at least two of whom shall be members of the Faculty of Education. The thesis supervisor shall be a faculty member in the Faculty of Education, Memorial University of Newfoundland.

### 25.8.3 Components of Study

#### 1. Courses

- a. Students are required to successfully complete two courses on the doctoral program.  
 Education 7001 - Doctoral Seminar in Education: Area of Specialization  
 Education 7002 - Advanced Educational Research
- b. Based on a consideration of educational background and research interest, students may be required to complete (or have completed at the masters level) as many as two (2) additional courses in research related to their program focus and specialty.
- c. Normally, no more than four courses may be undertaken on a candidate's program.
- d. Education 7003-30 - Special Topics (offered as required).

#### 2. Comprehensive Examination

The candidate shall undertake a written and an oral comprehensive examination, which will follow General Regulation **Comprehensive Examinations, Ph.D. Comprehensive Examination** which sets out the procedures for the comprehensive examination.

- a. A candidate in a Ph.D. program in Education shall normally take the written Comprehensive Examination prior to the seventh semester of the program. The candidate will have completed required courses prior to taking the Comprehensive Examination. In preparation for the Comprehensive Examination, the doctoral candidate, with the guidance of the candidate's supervisor, will undertake study of the sub-disciplines/areas of concentration identified by the candidate and supervisory committee and approved by the Doctoral Committee. Normally, these will include the candidate's area of concentration and two additional sub-disciplines/areas of concentration.
- b. Such study of sub-disciplines will normally include but not be limited to developing a reading list of important historical and current publications within the sub-disciplines, identifying emerging research emphases within the sub-disciplines, and writing scholarly review papers of these publications.
- c. In preparation for the written comprehensive examination, the doctoral candidate and the supervisory committee will agree on the topics to be examined. The examination will be written over a two day period.
- d. Normally, the oral comprehensive examination will occur within six weeks of the written examination, which if judged to be successful by the Comprehensive Examination Committee, will form the basis of an oral comprehensive examination.
- e. The procedure for scheduling the Comprehensive Examination shall be initiated by the candidate's supervisor who will notify, in writing, the Dean of Education of the candidate's readiness. The date of both the written examination and the oral examination will be determined by the Dean of Education. The candidate will receive a written notice of the scheduled date for both examinations from the Dean of Education.
- f. The Comprehensive Examination Committee shall be appointed by the Dean of Graduate Studies in accordance with School of Graduate Studies General Regulation **Comprehensive Examination, Ph.D. Comprehensive Examination** on the recommendation of the Dean, Faculty of Education. There will be six members of the Comprehensive Examination Committee as follows:

Dean of Education or delegate (Chair)  
 Chair of the Doctoral Committee of the Faculty Council of Education  
 Candidate's supervisor  
 Second member of candidate's supervisory committee



Dean of School of Graduate Studies or delegate (nonvoting)  
Member of the Faculty of Education or educational community selected by the Dean of Education.

In the event that the Chair of the Doctoral Committee is the candidate's supervisor, the Dean of Education shall appoint an additional member.

3. Ph.D. Thesis Regulations
  - a. The candidate must submit a thesis proposal based on his/her own research interest to all members of the Supervisory Committee for critical evaluation. Normally, the proposal must be approved prior to the eighth semester of the program. The Chairperson of the Supervisory Committee will inform the candidate within one month of its acceptance, rejection, or acceptance with recommended changes.
  - b. If the proposal is not acceptable, the candidate will normally be permitted a second attempt. The revised proposal must be submitted and deemed acceptable by the Supervisory Committee within a semester. Failure to resubmit within this time period will lead to termination of the candidate's program.
  - c. The thesis shall give evidence of the candidate's ability to carry out independent and original research, develop the necessary theoretical and methodological framework and analyses, and present the findings in a scholarly manner.
  - d. Each candidate will be required to present a seminar on her/his thesis research to the Faculty.
  - e. Ph.D. program will conclude with the examination and oral defence of the completed thesis in accordance with the appropriate sections of the General Regulation **Theses and Reports, Evaluation of Ph.D. Theses** governing the School of Graduate Studies.

#### Courses

7001 Doctoral Seminar in Education: Area of Specialization  
7002 Advanced Educational Research  
7003-30 Special Topics

## 25.9 Engineering and Applied Science

#### Professor and Dean

R. Gosine

#### Professor and Associate Dean (Graduate Studies and Research)

R. Venkatesan

The degree of Doctor of Philosophy is offered in the Faculty of Engineering and Applied Science and may be obtained either through full-time or part-time studies. The Ph.D. degree can be obtained through programs in the following disciplines: Civil Engineering, Electrical and Computer Engineering, Mechanical Engineering, and Ocean and Naval Architectural Engineering. At present, the following interdisciplinary research areas are active in the Faculty: Engineering Analysis; Environmental and Hydrotechnical Studies; Manufacturing and Robotics; Mechanics, Structures, and Materials; and Ocean Engineering. The interdisciplinary area of Ocean Engineering has been and continues to be a major strength for graduate studies and research in the Faculty of Engineering and Applied Science.

### 25.9.1 Qualifications for Admission

Admission to the Ph.D. program is limited and competitive. All applicants must meet the minimum qualifications described in the **General Regulations** for the School of Graduate Studies. Admission is normally restricted to candidates holding a Master's degree in Engineering or a related area. Decisions on admission, however, will also take into account such things as the applicant's rank in class, referees' assessments, general performance throughout the applicant's previous academic programs, and the availability of supervisors in the area of the applicant's interest. In cases of demonstrated ability, a student enrolled in the M.Eng. program may be allowed to transfer to the Ph.D. program without the completion of all the M.Eng. degree requirements. As well, in exceptional cases, direct entry to the Ph.D. program, after completion of a Bachelor's degree in Engineering or a related area, is possible.

Normally, applicants will be considered in January for admission for the following September. In special cases, applicants may also be considered in April and August. Applications should be made sufficiently far in advance to permit the University to obtain all relevant documents and review the application.

### 25.9.2 Program of Study and Research

A Ph.D. program shall normally consist of three components:

1. a minimum of 6 credit hours consisting of graduate courses recommended by the student's supervisory committee
2. a comprehensive examination as detailed in **Regulations for Ph.D. Comprehensive Examination**.
3. a thesis satisfying the requirements of the **General Regulations** for the School of Graduate Studies.

In cases of direct entry after a Bachelor's degree or promotion from a Master's program before fulfilment of the Master's course requirements, it is likely that the student will be required to take more credit hours than the normally required minimum. In such cases, the requirements for the course component of the student's program will be reviewed on an individual basis by the student's supervisory committee and the Dean of the Faculty of Engineering and Applied Science.

### 25.9.3 Regulations for Ph.D. Comprehensive Examination

#### Part I - Timing of Examination

A candidate registered in a Ph.D. program in the Faculty of Engineering and Applied Science shall normally take the Comprehensive Examination during the first year of the program.

#### Part II - Composition of the Examination Committee

The Examination Committee shall be appointed by the Dean of Graduate Studies on the recommendation of the Dean of Engineering and Applied Science. It shall consist of:

1. The Dean of Engineering and Applied Science (or delegate) who shall be the Chair and a voting member.
2. The Dean of Graduate Studies or delegate.
3. Four additional voting members nominated by the Faculty of Engineering and Applied Science. The candidate's Supervisor and not more than one other from the Supervisory Committee shall be among the nominated members of the Examination Committee.

### Part III - Content of Comprehensive Examination

The Comprehensive Examination for Ph.D. candidates shall consist of two parts, a research examination and a general examination.

#### 1. Research Examination

The candidate will provide a written submission to the Examination Committee outlining the proposed research program. In this brief, the candidate must demonstrate an acceptable understanding of the proposed research and indicate the availability of the facilities necessary to carry out the work.

The Comprehensive Examination Committee shall examine the candidate orally on any or all aspect(s) of the research proposal.

#### 2. General Examination

Within two weeks after the Research Examination the candidate shall submit to another oral examination by the same Committee. The candidate will be expected to demonstrate a mastery of the subdisciplines of engineering as defined in General Regulation **Comprehensive Examinations, Ph.D. Comprehensive Examination, 3.**

At least one week in advance of the first oral examination, the Chair of the Examination Committee will issue a notice to faculty and graduate students in the Faculty of Engineering and Applied Science, notifying the date and place of the examinations. Both oral examinations shall be open. After the candidate has been examined by the Examination Committee, others in the audience will be given an opportunity to question the candidate.

At the conclusion of the public portion of the oral examination, the Committee may meet in private to further question the candidate and may ask the candidate to appear for a written examination on specified topics within 14 days after the general oral examination. The candidate shall be given at least 7 days notice before such written examination.

The Examination Committee will meet *in camera* to arrive at its recommendations. After the Committee has considered the candidate's performance on all portions of the examination, the Chair shall report the result of the examination to the Dean of Graduate Studies. The report will be in accordance with General Regulation **Comprehensive Examinations, Ph.D. Comprehensive Examination.**

### 25.9.4 Courses

For a list of graduate courses offered by the Faculty of Engineering and Applied Science refer to the list of "Core Courses" and the list of "Other Courses" offered for the Master of Engineering program.

## 25.10 English Language and Literature

### Associate Professor and Interim Head of the Department

R. Hollett

The degrees of Master of Arts and Doctor of Philosophy are offered in English Language and Literature.

Candidates for the M.A. in English may complete the program as either part-time or full-time students. Candidates for the Ph.D. in English must be in attendance as full-time students for at least three semesters of the program.

### 25.10.1 Doctor of Philosophy

1. Admission to the Ph.D. in English is limited and competitive. Applicants should have a Master's degree in English or its equivalent from a recognized university and should have an outstanding academic record.

2. All candidates will be required to complete 15 credit hours in graduate courses. These courses will be selected by the candidate in consultation with the candidate's Supervisory Committee.

While candidates will normally be free to choose graduate courses of interest to them, it will be a primary responsibility of their Supervisory Committees to ensure that any serious deficiencies in their record of previous courses, graduate and undergraduate, are remedied, particularly in the area of proposed thesis research.

3. Candidates who have not previously taken English 7003 or its equivalent will take English 7003, which will count as one of the required courses for the Ph.D. Students who have taken English 7003 or its equivalent before entering the Ph.D. program must still complete 15 credit hours.

4. Candidates who have not completed English 4900 or English 5900 or an equivalent course will be required to complete English 5900, which will not count as one of the required courses for the Ph.D. The course will be graded "pass" or "fail". As in other graduate courses a grade of 65B or above is considered a pass.

5. Candidates must submit a thesis proposal which includes a statement of topic, a working title, a plan of research, and a preliminary bibliography. The thesis proposal should be approved by the Supervisory Committee and submitted to the departmental Graduate Studies Committee for its approval before the Comprehensive Examination and before the end of the fifth semester. The departmental Graduate Studies Committee shall return the thesis proposal to the candidate no later than one month after receiving it.

6. Reading knowledge of a second language will be required of all candidates. Reading knowledge is defined as a minimum B grade in a second-year language course taken within the previous five years, a passing grade in an approved second-language course for graduate students, or performance satisfactory to the Department in an arranged reading proficiency test (in which a dictionary may be used).

The language requirement should be completed before the Comprehensive Examination is taken.

The second language will normally be French. In exceptional circumstances, and on the recommendation of the Supervisory Committee and the departmental Graduate Studies Committee, a language other than French may be substituted.

The Supervisory Committee may also require a demonstrated reading knowledge of an additional language (other than French or the substituted language) if such knowledge is deemed necessary for the student's research interests.

7. The Ph.D. Comprehensive Examination in English is a written examination prepared by the candidate's Comprehensive Examination Committee.

In accordance with General Regulation **Comprehensive Examinations, Ph.D. Comprehensive Examination**, the candidate's Comprehensive Examination Committee will include the Head (or the Head's delegate, usually the Graduate Coordinator), the candidate's supervisor, and three other members of the Department.

The written examination shall consist of three parts: a four-hour examination in the student's area of concentration and two three-hour examinations in two other specified areas. In accordance with General Regulation **Comprehensive Examinations, Ph.D. Comprehensive Examination**, the examination shall take place before the end of the seventh semester.

Candidates will be graded "pass with distinction", "pass", "re-examination", or "fail", in accordance with General Regulation

**Comprehensive Examinations, Ph.D. Comprehensive Examination.** 4. Candidates who are marked for “re-examination” will be re-examined in the area or areas in which the Comprehensive Examination Committee has determined that the candidate's performance is deficient. The nature of this re-examination (and whether it will be written or oral) is left to the discretion of the Comprehensive Examination Committee.

### Courses

A selection of the following graduate courses will be offered to meet the requirements of candidates, as far as the resources of the Department will allow.

- Notes: 1. *Since it is impossible to list in detail the many topics that may from time to time be offered, the titles below refer only to the major periods and general subject areas in which specific courses may be available. The content and approach in specific courses will vary according to the research interests of students and faculty involved in the course. Students should consult the Department's annual Graduate Student Guide (or the Graduate Co-ordinator) for detailed descriptions of specific course offerings. Normally, no fewer than 30 credit hours in graduate courses are offered in any given academic year.*
2. *English 5900 cannot be counted as one of the required graduate courses in any program.*
3. *All students will normally take English 7003 - Trends in Contemporary Literary Theory, usually in their first semester.*
4. *Students who took graduate courses in English at Memorial before 1997 should consult with the Department before selecting further courses.*

5900 Bibliography and Research Methods  
 6403 Etymology (same as Linguistics 6403)  
 6420 English Dialectology I  
 6421 English Dialectology II  
 6999 Master's Essay (for non-thesis students)  
 7003 Trends in Contemporary Critical Theory  
 7032 Studies in Old English I  
 7034 Studies in Middle English I  
 7039 Studies in 16th-Century Literature III  
 7040 Studies in 16th-Century Literature IV  
 7041 Studies in 17th-Century British Literature I  
 7042 Studies in 17th-Century British Literature II  
 7047 Studies in 18th-Century British Literature III  
 7048 Studies in 18th-Century British Literature IV  
 7049 Studies in 19th-Century British Literature I  
 7050 Studies in 19th-Century British Literature II  
 7054 Studies in 20th-Century British Literature II  
 7055 Studies in 20th-Century British Literature III  
 7058 Studies in 19th Century American Literature I  
 7063 Studies in 20th-Century American Literature III  
 7064 Studies in 20th-Century American Literature IV  
 7066 Studies in 19th-Century Canadian Literature I  
 7067 Studies in 19th-Century Canadian Literature II  
 7069 Studies in 20th-Century Canadian Literature I  
 7072 Studies in 20th-Century Canadian Literature IV  
 7073 Studies in Newfoundland Literature I  
 7079 Studies in Post-Colonial Literature I  
 7082 Studies in Critical Theory I  
 7085 Special Readings in English I  
 7086 Special Readings in English II  
 7087 Special Readings in English III  
 7020-25 Special Topics in English

## 25.11 Ethnomusicology

### Professor and Director of the School of Music

Tom Gordon

### Professor and Program Coordinator

Beverly Diamond

The Doctor of Philosophy program in Ethnomusicology is administered by the School of Music in consultation with the Department of Folklore, and generally in response to recommendations from an Interdisciplinary Advisory Committee with representation from both academic units, chaired by the Program Coordinator.

The degree of Ph.D. in Ethnomusicology is offered by part-time and full-time study. This program is a research degree, generally involving extended fieldwork. The resources of the Memorial University Folklore and Language Archive are available to graduate students in Ethnomusicology.

### 25.11.1 Qualifications for Admission

Applicants may be admitted to the program if they have at least a B+ average in a M.A. degree in Ethnomusicology, another field of Music, or other relevant discipline in the Humanities or Social Sciences with evidence of specialization in music. Applicants from a discipline other than Music will be expected to demonstrate the following skills:

- Competent performance in any musical tradition, as judged by a musician knowledgeable about that tradition.
- Knowledge of culturally appropriate language for discussion of performance techniques in that tradition.
- Ability to discuss musical details on the basis of aural and/or written sources, as appropriate to that tradition.

Candidates for admission may, at the discretion of the Interdisciplinary Advisory Committee, be required to write diagnostic examinations measuring skills and knowledge in music literacy, theory, or aural perception. Candidates with deficiencies in any of these areas may be required to take remedial course work prior or in addition to the required program.

Upon completion of M.A. course work, students who have attained an A average may wish to be considered for transfer to the Ph.D. program. Students who seek this option must apply to the Interdisciplinary Advisory Committee to be considered for transfer one month prior to the completion of their M.A. courses or by the end of the 5th semester. (see General Regulation **Qualifications for Admission, Master's Program**).

### 25.11.2 Program Requirements

The Ph.D. program may be completed within twelve to fifteen consecutive semesters of full-time study, depending on fieldwork requirements. The degree is normally taken by completing course work, comprehensive examinations, a language proficiency requirement, and a Ph.D. thesis, defended in accordance with General Regulation **Theses and Reports** of the School of Graduate Studies.

1. Students must complete a minimum of 21 credit hours of course work. If required courses have been completed at the M.A. level, electives may be substituted (with approval of the Interdisciplinary Advisory Committee). The required courses are:
  - a. Music 8001; Folklore 6010, 6030.
  - b. ONE of Music 6002 or Folklore 7100.
  - c. Nine credit hours of electives selected from courses listed below or from relevant courses offered in another discipline (with the approval of the Interdisciplinary Advisory Committee). Ph.D. students may take up to two courses (6 credit hours) in a cognate discipline.
  - d. Reading proficiency in one language other than English, relevant to the research area, demonstrated to the satisfaction of the Interdisciplinary Advisory Committee. The choice of language must be approved by the Interdisciplinary Advisory Committee. The language exam should normally be completed before the comprehensive exams.
2. Comprehensive examinations will be administered in a major area, minor area, and theoretical/interdisciplinary area; a component of the comprehensive examination will test audio-visual skills. Bibliographies and discographies for several focused topics will be developed by the student in consultation with his/her supervisory committee and will be the basis of examination questions. The written portion of the examination will be scheduled over a one-week period. An oral defence of the written essays will be scheduled normally within one month following the completion of the written examination. (See General Regulation **Comprehensive Examinations, Ph.D. Comprehensive Examination**).
3. Students must complete a thesis, examined and defended in accordance with General Regulation **Theses and Reports** of the School of Graduate Studies. A thesis proposal, including a working title, statement of purpose and research scope, outline of theoretical and methodological approach, working plan, and preliminary bibliography, together with proposed membership of the supervisory committee, must be submitted to the Interdisciplinary Advisory Committee no later than the fifth semester of study. The thesis shall demonstrate the candidate's ability to carry out original and independent research, develop the necessary theoretical and methodological framework, and present the findings in a scholarly manner.

#### Courses

##### Theories and Methods:

Music 6001 Research Methods  
 Music 6002 Graduate Seminar  
 Music 7001 Research Problems and Methods in Ethnomusicology  
 Music 8001 Theoretical Issues in the Study of Music  
 Folklore 6010 Survey of Folklore Genres and Processes  
 Folklore 6020 Field and Research Methods  
 Folklore 6030 Folklore Theories  
 Folklore 6040 Feminist Theories: Perspectives and Issues  
 Folklore 6080 Vernacular Theories  
 Folklore 6090 Ethnology  
 Folklore 7100 Advanced Folkloristics II: Research and Ethnography

##### Form and Performance:

Music 7005 Performance Option  
 Folklore 6100 Song and Music  
 Folklore 6120 Ballad  
 Folklore 6130 Folk Music Canons and Documentary Sound Recordings  
 Folklore 6200 Folktale  
 Folklore 6210 Legend  
 Folklore 6220 Personal Experience Narrative  
 Folklore 6250 Language and Play  
 Folklore 6260 Ethnography of Communications  
 Folklore 6300 Ethnography of Belief  
 Folklore 6310 Health Systems  
 Folklore 6350 Custom  
 Folklore 6360 Traditional Drama  
 Folklore 6400 Material Culture  
 Folklore 6410 Vernacular Architecture  
 Folklore 6420 Art and the Artifact  
 Folklore 6430 Food and Culture  
 Folklore 6720 Folklore and Literature

##### Area and Genre Studies:

Music 7010 World Music: Music of Asia and Oceania  
 Music 7011 World Music: Music of Africa and the Americas  
 Music 7012 Canadian Musical Traditions  
 Music 7013 Music and Culture  
 Music 7017 Folksong  
 Music 7018 Jazz and Blues: The Roots of Popular Music  
 Folklore 6120 Ballad  
 Folklore 6600 Folklore of Newfoundland  
 Folklore 6610 Folklore of Canada  
 Folklore 6620 Folklore of the United States  
 Folklore 6630 Folklore of the British Isles  
 Folklore 6770 The Global and the Local

##### Social Identities:

Music 7006 Urban Ethnomusicology  
 Music 7007 Music in the Study of Gender, Race and Class  
 Music 7009 Music and Place

Folklore 6510 Occupational Folklore  
 Folklore 6551 Indigenous Expressive Cultures in Cross-cultural Encounter  
 Folklore 6730 Folklore and Gender  
 Folklore 6780 Ethnicities

**Independent Study:**

Music 7026-29 Directed Reading in Ethnomusicology  
 Folklore 6570-79 Reading Course in Folklore

**Special Topics:**

Music 6800-09 Special Topics in Music  
 Music 7800-09 Special Topics in Music  
 Folklore 6511-29 Special Topics in Folklore  
 Folklore 6570-79 Reading Course in Folklore

**Public and Applied Ethnomusicology and Folklore:**

Music 6700 Music Industries Seminar  
 Music 6750 Music Industries Internship (2 cr. hrs.)  
 Folklore 6740 Public Sector Folklore  
 Folklore 6760 Archiving  
 Folklore 6790 Museums: Perspectives and Practices  
 Folklore 6800 Applied Folklore

**Interdisciplinary Perspectives:**

Music 7008 Media Studies  
 Folklore 6700 Folklore and Culture  
 Folklore 6710 Oral Tradition and Oral History  
 Folklore 6750 Popular Culture: Theory and Debate

## 25.12 Folklore

**Associate Professor and Head of the Department**

M. Lovelace

The degree of Doctor of Philosophy in Folklore is offered by part-time and full-time study and is primarily a research degree. The program normally requires extensive fieldwork research in Newfoundland and/or the Maritimes.

Integral to the teaching of the Department of Folklore is the work of the Memorial University of Newfoundland Folklore and Language Archive; see section under Master of Arts, Folklore.

### 25.12.1 Doctor of Philosophy

1. An applicant for admission to the Ph.D. program in Folklore must hold an M.A. degree in Folklore, or its equivalent as determined by the Head of the Department and the Dean.
2. All Ph.D. students in the Folklore program must complete *at least* 18 credit hours in program graduate courses which shall include Folklore 7000 and 7100. Candidates will normally be free to choose graduate courses of interest to them in Folklore or related disciplines, though it will be a primary responsibility of their committees to ensure that any serious deficiencies are made good. At the end of the second semester the program and further status of the candidate will be reviewed.
3. Second Language Requirements:
  - a. All Ph.D. candidates are required to demonstrate an adequate reading knowledge of a second language - normally a common, modern language.
  - b. Reading knowledge is defined as a minimum B grade in a second-year language course taken within the previous five years, or performance satisfactory to the department in an arranged reading proficiency test.
  - c. The selection of a second language can be based on the student's research requirements.
  - d. The selection of a second language must be made in consultation with the student's faculty advisor or supervisor. Confirmation that the choice is acceptable must be obtained from the Department.
  - e. The language requirement must normally be fulfilled before a student takes the Ph.D. Comprehensive Examination.
4. Comprehensive Examination for the Ph.D.:
  - a. The Ph.D. Comprehensive Examination shall be administered in accordance with General Regulation **Comprehensive Examination**. The examination may be oral, written, or both, and shall consist of three sessions, each of three hours' duration, within a one-week period. The examination will deal with all areas of folklore and folklife scholarship;
  - b. The examination can be taken only upon completion of the second language requirements and no earlier than the end of the first year after admission to candidacy but not later than one year after the completion of the program courses. The examination will normally be scheduled in the third week of March or of November.
5. Ph.D. Thesis:
  - a. The candidate will normally submit a thesis proposal based on his/her own interests no later than the end of the fourth semester of the program. The thesis proposal will include a working title, names of preferred Supervisor and two other committee members, statement of topic, plan of research, statement of methodological and theoretical approach, a brief review of the literature and a preliminary bibliography. The proposal will be circulated to the Department for critical evaluation on the basis of which the candidate will be informed, within one month, by the Supervisor, of its acceptance, rejection, or acceptance with recommended changes.
  - b. The thesis shall give evidence of the candidate's ability to carry out independent and original research, develop the necessary theoretical and methodological framework and present the findings in a scholarly manner.

**Courses**

A selection of the following graduate courses will be offered to meet the requirements of candidates, normally after consultation with the Head of the Department or the Graduate Studies Administrator, and as far as the resources of the Department will allow. Courses are structured according to the categories of: Theories and Methods, Issues, Form and Performance, Special Topics, Regional National and International Heritage, Social Identities, Public and Applied Folklore and Interdisciplinary Perspectives and Required (Ph.D.):

### **Theories and Methods**

6010 Survey of Folklore Genres and Processes  
6020 Field and Research Methods  
6030 Folklore Theories  
6040 Feminist Theories: Perspectives and Issues  
6080 Vernacular Theories  
6090 Ethnology

### **Issues**

6050 Issues in Folkloristics  
6060 Issues in Folk Literature  
6070 Issues in Folklife

### **Form and Performance**

6100 Song and Music  
6120 Ballad  
6130 Folk Music Canons and Documentary Sound Recordings  
6200 Folktale  
6210 Legend  
6220 Personal Experience Narrative  
6250 Language and Play  
6260 Ethnography of Communications  
6300 Ethnography of Belief  
6310 Health Systems  
6350 Custom  
6360 Traditional Drama  
6370 Ritual, Festival and Public Display  
6400 Material Culture  
6410 Vernacular Architecture  
6420 Art and the Artifact  
6430 Food and Culture  
6720 Folklore and Literature

### **Special Topics**

6511-29 Special Topics in Folklore  
6550 Special Research in Folklore  
6551 Indigenous Expressive Cultures in Cross-Cultural Encounter  
6552-69 Special Research in Folklore  
6570-79 Reading Course in Folklore

### **Regional, National and International Heritage**

6600 Folklore of Newfoundland  
6610 Folklore of Canada  
6620 Folklore of the United States  
6630 Folklore of the British Isles  
6640 Traditional Culture of Scotland  
6650 Culture and Traditions of Ireland  
6660 Folklore of the Francophone Regions  
6690 International Folklore

### **Social Identities**

6510 Occupational Folklife  
6730 Folklore and Gender  
6770 The Global and the Local  
6780 Ethnicities

### **Public and Applied Folklore**

6740 Public Sector Folklore  
6760 Archiving  
6790 Museums: Perspectives and Practices  
6800 Applied Folklore

### **Interdisciplinary Perspectives**

6700 Folklore and Culture  
6710 Oral Tradition and Oral History  
6750 Popular Culture: Theory and Debate

### **Required (Ph.D.)**

7000 Advanced Folkloristics I  
7100 Advanced Folkloristics II Research and Ethnography

Credit may not be obtained for both 6010 and the former 6110; 6020 and the former 6111; 6030 and the former 6112; 6100 and the former 6430; 6120 and the former 6445; 6300 and the former 6230; 6350 and the former 6230; 6400 and the former 6501; 6720 and the former 6460.

## **25.13 Food Science**

See under Biochemistry

## **25.14 Geography**

**Professor and Head of the Department**

K. Story

### **25.14.1 Doctor of Philosophy**

1. To be admitted to the program, an applicant must have completed either a Master of Arts or a Master of Science degree, or its

equivalent, in Geography or a related discipline. In exceptional circumstances, a candidate who has completed either a B.A. (Honours) or B.Sc. (Honours) degree, and who has spent not less than 12 months in a M.A. or M.Sc. degree program may apply for transfer into a Ph.D. program. A successful application for transfer will require that the candidate demonstrate to the satisfaction of the Department an ability to pursue research at the doctoral level.

2. The deadline for submission of applications for admission is January 15. Candidates will normally commence their programs in the Fall semester.
3. Research areas for graduate study at the Doctoral level are cultural and historical geography, economic geography, resource management, physical geography and geographic information sciences.
4. An applicant will be admitted to a doctoral program only if a faculty member agrees to act as supervisor, and at least two other individuals are willing to serve on the supervisory committee.
5. All candidates must successfully complete Geography 6000 if that course, or an equivalent course, has not been included in their Master's program. In addition, all candidates are required to successfully complete a minimum of 6 credit hours in graduate program courses.
6. The supervisory committee may decide that a candidate successfully completes an examination for reading or speaking a language other than English.
7. After the successful completion of all required courses, candidates must take a comprehensive examination which will have both a written and an oral component.
8. Following successful completion of the comprehensive examination the candidate will submit a written research proposal to the supervisory committee. The proposal must then be approved by the Committee prior to the commencement of research by the candidate.
9. Each candidate will be required to present a seminar on their research to the Department.
10. The Ph.D. program will conclude with the examination and oral defense of the completed thesis in accordance with the appropriate sections of the **GENERAL REGULATIONS** governing the School of Graduate Studies.

### Courses

A selection of the following graduate courses will be offered to meet the requirements of candidates as far as the resources of the Department will allow:

6000 Development of Geographical Thought  
 6100 Research Techniques in A Selected Field of Geography I  
 6101 Research Techniques in A Selected Field of Geography II  
 6120 Spatial Pattern Analysis and Computer Mapping  
 6150 Environmental Remote Sensing and Image Analysis  
 6200 Economic Geography I: Location Theory  
 6201 Economic Geography II: Regional Development  
 6202 Economic Geography III: Problems in Transportation  
 6203 Economic Geography IV: Land Use Pattern Analysis  
 6250 Conservation of Natural Resources  
 6300 Problems in Fisheries Geography  
 6301 Methodologies of Fisheries Geography  
 6400 Fluvial Geomorphology  
 6401 Glacial Geomorphology  
 6403 Hydrology  
 6410 Climatology  
 6420 Chronologies in Physical Geography  
 6430 Biogeography  
 6500 Cultural Geography  
 6510 Ethnic Group Settlement in the New World  
 6550 Population  
 6600 Historical Geography  
 6700 Political Geography  
 6800 Urban Geography  
 6801 Spatial Aspects of Urbanization and City System Development  
 6802 Internal Structure of Cities  
 6820 Cartographic Design  
 6830 Cartographic Production  
 6900 Graduate Seminar in Regional Geography  
 6990-95 Special Topics in Geography

### 25.14.2 Geology

See Earth Sciences

### 25.14.3 Geophysics

See Earth Sciences

### 25.15 History

**Professor and Head of the Department**

C. Youé

The degrees of Doctor of Philosophy and Master of Arts are offered in History by full-time or part-time study.

#### 25.15.1 Doctor of Philosophy

1. The Ph.D. degree in History is offered in the following areas:
  - a. Canadian History
  - b. Maritime History
  - c. Newfoundland History

2. An applicant must hold either a Master's degree in History or a Bachelor's degree in History with first-class Honours or their equivalents as determined by the Head of the Department and the Dean.
3. All candidates must successfully complete History 7000 and 7001 in the first year of the program. The Supervisory Committee may require the candidate to complete additional graduate courses.
4. All candidates must demonstrate in accordance with regulations established by the School of Graduate Studies a reading knowledge of French before taking the comprehensive examination. On the recommendation of the Supervisory Committee a modern language other than French may be substituted. In addition, the Supervisory Committee may require a demonstrated reading knowledge of a second language other than French or English (or the substitute language).
5. Candidates will undertake supervised reading in fields prescribed by the Department. The Supervisors of these programs of reading, along with the thesis Supervisor, will comprise the student's Supervisory Committee. This reading will prepare the student for the comprehensive oral examination.
6. Candidates must submit a thesis proposal, deemed acceptable by the Supervisory Committee, to the Department before sitting the comprehensive examination.
7. Candidates will normally sit the comprehensive oral examination in the second year of the program.
8. Interested applicants are urged to consult with the Head of the Department on these prerequisites and other requirements before filing an application for admission.

### Courses

A selection of the following graduate courses will be offered to meet the requirements of candidates as far as the resources of the Department will allow:

6000 Advanced Studies in Newfoundland History  
 6010 Advanced Studies in Canadian History  
 6020 Advanced Studies in the History of the United States  
 6030 Advanced Studies in French History  
 6040 Advanced Studies in British History  
 6050 Advanced Studies in German History  
 6060 Advanced Studies in North Atlantic History  
 6070 Advanced Studies in Social History  
 6075 Advanced Studies in Labour and Working Class History  
 6080 Advanced Studies in Intellectual History  
 6090 Advanced Studies in Women's History  
 6095 Advanced Studies in Ethnohistory  
 6100 Advanced Studies in Military History  
 6105 Advanced Studies in Diplomatic History  
 6110 Advanced Studies in Maritime History  
 6120 Advanced Studies in Economic and Business History  
 6125 Medical Science and Social Responsibility in Health Care: Aspects of Medical History (*Cross-listed as Medicine 6420*)  
 6130 Quantification and Measurement in History  
 6140-59 Research in Special Topics  
 6160-79 Reading Courses (Special Topics)  
 6180 Seminar in Historiography  
 6200 Masters Seminar I  
 6210 Sources, Methods and Criticism: Practising History  
 6999 Masters Research Paper (9 credit hours)  
 7000 Ph.D. Seminar I  
 7001 Ph.D. Seminar II

## 25.16 Linguistics

### Associate Professor and Head of the Department

M. Mackenzie

The degrees of Master of Arts and Doctor of Philosophy are offered in Linguistics.

### 25.16.1 Doctor of Philosophy

1. The degree of Doctor of Philosophy is offered in the following areas:
  - a. Languages in which the Department has demonstrated expertise, especially languages of the Newfoundland and Labrador Area.
  - b. Historical and Comparative Linguistics.
  - c. Language Variation and Language Contact.
2. In order to be admitted to the Ph.D. in Linguistics, a student shall normally hold a Master's degree in Linguistics. In the case of a student who does not meet the above requirement but who holds a language-oriented Master's degree, a program of additional linguistics courses, supplementary to those normally considered to be required in the Ph.D. program, may be required.
3. The program of each candidate must be approved by the Dean of Graduate Studies upon the recommendation of the Supervisory Committee in consultation with the Head of the Department.
4. Candidates who fulfill the requirement in Clause 2 and who otherwise possess the qualifications of Ph.D. candidates will embark on a program approved on an individual basis. This will normally include not less than 18 credit hours in graduate courses, at least 6 credit hours of which must be at the 7000-level.
5. Where needed, each program will include appropriate courses to ensure that the student will have completed 9 credit hours from graduate courses in each of two required fields selected from the following:
  - a. Phonetics and Phonology
  - b. Morphology and Syntax
  - c. Comparative and Historical Linguistics
  - d. Dialectology and Sociolinguistics
6. The comprehensive examination (see Regulation **Comprehensive Examinations, Ph.D. Comprehensive Examination** of the **General Regulations**) includes two written and two oral examinations. Students must meet all language requirements prior to



undertaking their comprehensive examination.

- a. The written examinations consist of two separate research papers. These papers will be submitted to the Examination Committee. At least one of the papers must be in one of the core areas of phonetics/phonology, morphology, syntax or semantics. The topic selected for each paper must obtain the prior approval of the Graduate Studies Committee of the Department. In each of these papers, candidates must demonstrate knowledge of the literature on the topic selected, general mastery of the discipline of linguistics, and ability to undertake independent research.
  - b. The Examination Committee will examine the candidate orally, on each paper, within one month of submission. Questioning can be as wide-ranging as the committee deems necessary to ensure that the student displays a thorough and comprehensive knowledge of the area in question.
  - c. The Examination Committee shall consist of the Head of Department (or delegate) who shall chair the committee, the Supervisor, the Dean of Graduate Studies (or delegate), and other members necessary to satisfy General Regulation **Comprehensive Examinations, Ph.D. Comprehensive Examination, 2.**, who may normally include the members of the Supervisory Committee. If the Head of Department is also a member of the Supervisory Committee, an additional representative of the department shall be appointed to chair the Examination Committee.
7. Initially, candidates must obtain approval for their Ph.D. thesis topics from the Graduate Studies Committee of the Department, in consultation with the Supervisory Committee. The thesis topic is normally selected before the end of the second full year in the program. Once the topic is approved, a more detailed thesis proposal must be presented to the Department in both written and oral format, and must receive formal departmental approval prior to the writing of the thesis.
  8. Proficiency in a language other than the candidate's first language will be required, as demonstrated by a minimum B grade in a second-year language course, or performance satisfactory to the department in an arranged reading proficiency test. A structural knowledge of a non-Indo-European language is also required, as demonstrated by a minimum B grade in a field methods/language structure course, or other performance satisfactory to the department. Depending on the program, a reading knowledge of one or more additional languages may be required. Students must meet all language requirements before undertaking their comprehensive examinations.
  9. All Ph.D. students are advised to consult the Linguistics department's Graduate Handbook for details on program requirements and for general information relating to the graduate program.

### Courses

A selection of the following graduate courses will be offered to meet the requirements of students, as far as the resources of the Department will allow. Full information is to be found in the Department's Graduate Brochure.

6001 Issues in Morphosyntax

6050-54 Structure of a North American Aboriginal Language (Credit restriction: Except where an exemption is supplied by the head of the department, a student may not obtain credit for more than one course in the 6050-54 series. Students may not obtain credit for any of the previously offered 6010, 6011, 6020, 6021, 6030, 6031, 6040, 6041 in addition to a course in the 6050-54 series.)

6055-59 Structure of an Uncommonly-Taught Language (Credit restriction: Except where an exemption is supplied by the head of the department, a student may not obtain credit for more than one course in the 6055-59 series.)

6110 Selected Topics in Transformational Grammar

6115 Topics in the Syntax of A Selected Language (Prerequisite: 6001 or 6110)

6150 Principles of Language Acquisition

6151 Selected Topics in Language Acquisition (Prerequisite: 6150)

6200 Generative Phonology

6201 Selected Topics in Phonology (Prerequisite: 6200)

6210 Sociolinguistics (Credit restriction: A student may not obtain credit for both 6210 and 6211)

6212 Selected Topics in Language and Gender

6220 Areal and Temporal Variations in Language

6300-09 Special Subjects

6350 General Romance Linguistics

6390 Franco-Canadian

6400 Comparative and Historical Linguistics

6401 Morphosyntactic Change (Prerequisite: 6400)

6403 Etymology (cross listed as English 6403)

6410 Comparative Structure of a Selected Language Family (Prerequisite: 6011 or 6031 or 6403)

6420 English Dialectology I

6421 English Dialectology II

6430 Selected Topics in Linguistic Variation (Prerequisite: 6211 or 6220)

6500 Field Methods

6601 Modern Linguistic Theories

6700 Experimental Phonetics

6701 Selected Topics in Experimental Phonetics (Prerequisites: 6200, 6700)

6800 Selected Topics in Morphology

6880 Selected Topics in Semantics

7000 Seminar in Research Methods

7001 Analytical issues in Linguistics

7100 Topics in North American Native Languages (Prerequisites: a course from series 6050-6054 or the former 6011, 6031, 6041)

7200 Advanced Topics in Syntax (Prerequisites: 6110, plus either 6001 or 6115)

7400 Seminar in Comparative and Historical Linguistics (Prerequisite: 6400 or 6410)

7430 Seminar in Linguistic Variation (Prerequisite: 6430)

7800 Seminar in Morpho-semantics (Prerequisite: 6800)

7900-03 Special Topics in Linguistics

Note: *Appropriate equivalent credits may be given for courses taken at the Summer Institute of the Linguistic Society of America, or a similar institute. Students are encouraged to attend these institutes: they should, however, consult the Head of the Department as to what courses may be appropriate for credit.*

## 25.17 Mathematics and Statistics

### Head of the Department

C. Radford

The degrees of Master of Applied Statistics (see appropriate calendar entry), Master of Science and Doctor of Philosophy are offered in the Department of Mathematics and Statistics. The Masters' degrees are offered by full-time and part-time studies.

### 25.17.1 Doctor of Philosophy

The following regulations should be read in conjunction with the **General Regulations**.

Admission to the Ph.D. program is limited and competitive. Of all the requirements listed in the regulations, the writing of the doctoral thesis is the most important, and a candidate may complete all other requirements satisfactorily without qualifying for the degree.

The real test is to show ability to attack and solve a significant mathematical or statistical problem independently and in an original manner for the thesis. The doctoral thesis must definitely advance the subject which it treats.

### 25.17.2 Specific Regulations for the Ph.D. in Mathematics

- The Department requires applicants who do not already hold an appropriate Master's degree (or equivalent) to register for the M.Sc. rather than for the Ph.D. directly.
- The candidate normally shall satisfactorily complete at least 6 credit hours from the following list:
  - Algebra: 6320, 6321
  - Analysis: 6310, 6311, 6312
  - Applied Mathematics: 6201 or 6212, 6100
  - Combinatorics: 6340, 6341, 6342
  - Topology: 6300 or 6301, 6332
- The Comprehensive Examination shall consist of two parts, called hereafter "qualifying review" and "intermediate review", and is subject to the following regulations. (More detailed information concerning the content of these examinations may be obtained from the Department).
  - The qualifying review consists of one or more examinations, written or oral or both, and is to take place as soon as the Supervisory Committee deems appropriate, but not later than at the end of the candidate's first year in the doctoral program. Its main purpose is to ensure that the candidate has a sufficiently broad general knowledge of Mathematics (especially Analysis, Algebra, and Topology) before beginning work on the thesis.
  - At a time to be determined by the Supervisory Committee, but not later than at the end of the candidate's second year in the doctoral program, the candidate must take the intermediate review, also consisting of one or more examinations which may be written or oral or both. Its purpose is to ensure that the candidate has sufficient specialized knowledge in the area of the proposed research work and related areas.
  - The examinations associated with both the qualifying review and the intermediate review are general, and are not based on any particular course.
  - Successful completion of both the qualifying and intermediate reviews constitutes successful completion of the Comprehensive Examination in the sense of General Regulation **Comprehensive Examinations**.

### 25.17.3 Specific Regulations for the Ph.D. in Statistics

- Successful completion of a M.A.S. or M.Sc. program or the equivalent is a prerequisite for entry into a Ph.D. program.
- The candidate shall complete satisfactorily a minimum of 6 credit hours in graduate courses other than those courses required for a M.A.S./M.Sc. Candidates may be required by the Supervisory Committee to take additional program courses.
- The comprehensive examination shall consist of a written and an oral examination.
  - The written examination shall take place as soon as the supervisory committee deems appropriate but not later than at the end of the candidate's first year in the doctoral program. The purpose of the written comprehensive examination is to ensure that the candidate has a broad general knowledge of statistics before beginning work on the thesis.
  - At the time to be determined by the supervisory committee, but not later than at the end of the candidate's second year in the doctoral program, the candidate will be required to take the oral examination. The purpose of the oral examination is to ensure that the candidate is making sufficient progress and has sufficient specialized knowledge in the area of the proposed research work and related areas. The oral examination may also include questions of a general nature relating to the field of specialization.
- Each candidate will be required to present at least one paper at a graduate seminar on a topic to be approved by his or her Supervisor.

**Table of Credit Restrictions for Present Mathematics Courses with Former Mathematics Courses**

Credit may be obtained for only course from each of the pairs listed in this table.

Present Course	Former Course	Present Course	Former Course
6323	6030	6212	6080
6321	6032	6310	6130
6322	6035	6330	6200
6340	6040	6331	6210
6341	6041	6332	6350
6342	6042	6312	6500

#### Courses

A selection of the following graduate courses will be offered to meet the requirements of candidates, as far as the resources of the Department will allow:

#### Mathematics

- 6100 Dynamical Systems
- 6101 Modern Perturbation Theory
- 6102-6109 Special Topics in Applied Mathematics
- 6120 The Theoretical Fluid Dynamics
- 6121 Functional Differential Equations
- 6201 Numerical Methods for Partial Differential Equations

6202-6209 Special Topics in Numerical Analysis  
 6210 Numerical Solution of Differential Equations (for Computational Science students only - required core course)  
 6212 Numerical Methods for Initial Value Problems  
 6300 Algebraic Topology I (Homology Theory)  
 6301 Algebraic Topology II (Homotopy Theory)  
 6302 Algebraic Topology III (Theory of Fibre Bundles)  
 6304-6309 Special Topics in Topology  
 6310 Functional Analysis  
 6311 Complex Analysis  
 6312 Measure Theory  
 6313-6319 Special Topics in Analysis  
 6320 Group Theory  
 6321 Ring Theory  
 6322 Nonassociative Algebra  
 6323 Homological Algebra  
 6324-6329 Special Topics in Algebra  
 6330 Analytic Number Theory  
 6331 Algebraic Number Theory  
 6332 Point Set Topology  
 6340 Graph Theory  
 6341 Combinatorial Design Theory  
 6342 Advanced Enumeration  
 6343-6349 Special Topics in Combinatorics  
 6910 Topology Seminar  
 6940 Analysis Seminar  
 6950 Algebra Seminar

#### **Statistics**

6503 Stochastic Processes  
 6505 Survival Analysis  
 6510 Mathematical Statistics  
 6520 Linear Models  
 6530 Generalized Linear Longitudinal Mixed Models  
 6540 Time Series Analysis  
 6545 Statistical Computing  
 6550 Nonparametric Statistics  
 6560 Continuous Multivariate Analysis  
 6561 Categorical Data Analysis  
 6570-6589 Selected Topics in Statistics and Probability  
 6590 A Course in Statistical Consulting  
 6930 Statistics Seminar

## **25.18 Medicine**

### **Professor of Medicine and Dean**

J. Rourke

### **Professor and Assistant Dean**

P. F. Moody-Corbett

There are eight program areas in the Faculty of Medicine: Applied Health Services, Research, Cancer, Cardiovascular and Renal Sciences, Clinical Epidemiology, Community Health, Human Genetics, Immunology and Neurosciences. Each program area has a coordinator who is responsible to communicate the interests of the program to the Faculty of Medicine Graduate Studies Committee and participate in the admission of graduate students into the graduate program in Medicine. Full descriptions of each of the programs is available at [www.med.mun.ca/graduate/](http://www.med.mun.ca/graduate/).

The degree of Doctor of Philosophy (in all programs excluding Applied Health Services Research) is offered in the Faculty of Medicine by full-time and part-time study. The Faculty of Medicine also offers the opportunity for students registered in the M.D. program to obtain a Ph.D. in a combined and integrated M.D.-Ph.D. program.

### **25.18.1 Doctor of Philosophy**

#### **Qualifications for Admission**

The admission requirements for the Ph.D. degree in Medicine are as given under the **General Regulations** governing Ph.D. degrees.

#### **Program of Study and Research**

1. The program of study for a Ph.D. degree is the responsibility of the supervisory committee composed of a supervisor and at least two other faculty members.
2. It is the responsibility of the supervisory committee to meet regularly (at least annually) with the student and to provide guidance at all stages of the candidate's program. An annual report prepared by the supervisor and signed by the student and all members of the committee is required to be submitted to the Assistant Dean of Research and Graduate Studies (Medicine).
3. Graduate students are expected to participate in Faculty of Medicine seminars and journal clubs.
4. Graduate students in the Ph.D. degree normally take the comprehensive examination before the end of the seventh semester. The comprehensive examination consists of both a written and oral component and is in accordance with the **General Regulations** governing Ph.D. degrees.

### **25.18.2 M.D.-Ph.D. Program**

The M.D.-Ph.D. program is offered by full-time study to highly motivated students with an excellent academic record who are interested in a research career in academic medicine and wish to receive both of these degrees.

The purpose of the M.D.-Ph.D. program is to provide medical education, including clinical skills, and training in health research. The integrated program is designed to increase the efficiency of obtaining both degrees, and the student is required to fulfill the complete

requirements of both the M.D. and Ph.D. degrees.

M.D.-Ph.D. students are jointly enrolled in the M.D. program and the Ph.D. program which is overseen by the M.D.-Ph.D. Program Committee (Faculty of Medicine).

#### Qualifications for Admission

1. To be admitted into the M.D.-Ph.D. program, applicants must meet the admission requirements of both the M.D. and Ph.D. programs. Admission shall be by the Dean of Graduate Studies on the recommendation of the Assistant Dean, Research and Graduate Studies (Faculty of Medicine), and the Dean of Medicine on the recommendation of the Assistant Dean, Admissions (Faculty of Medicine).
2. Normally, students will enter the M.D.-Ph.D. program from the M.D. program after successful completion of the pre-clerkship phase or from the Ph.D. program after one or two years of the graduate program and acceptance into the M.D. program.

### 25.18.3 Program of Study and Research

1. The program of study for the Ph.D. is described in the preceding section and follows the **General Regulations** governing the Ph.D. degree. For the purposes of timing of the comprehensive examination, only the semesters in the Ph.D. component of the program will be counted.
2. The program of study for the M.D. follows the **General Regulations** governing the M.D. degree.
3. During the Ph.D. component, students are expected to maintain clinical skills by arrangement with the M.D.-Ph.D. Program Committee. Before resuming full-time studies in the clerkship phase of the M.D. component, students will be required to demonstrate competency in clinical skills.
4. During the M.D.-Ph.D. program (including the clerkship phase), students are expected to participate in Faculty of Medicine seminars and journal clubs in their area of research specialization.
5. The Ph.D. will be awarded to students in the M.D.-Ph.D. program on completion of all academic requirements appropriate to the Ph.D. degree. The M.D. will be awarded to students in the M.D.-Ph.D. program on completion of all academic requirements appropriate to the M.D. degree.

### 25.18.4 Evaluation

Failure to maintain academic standing in either the Ph.D. or M.D. components will lead to termination of the M.D.-Ph.D. program which will be annotated on the student's transcript. On failure of the M.D. component, the Dean of Graduate Studies may approve transfer to a Ph.D. program on the recommendation of the Assistant Dean (Research and Graduate Studies), Faculty of Medicine. On failure of the Ph.D. component, the Dean of Medicine may approve transfer to a M.D. program on the recommendation of the Assistant Dean of Undergraduate Medical Education.

#### Courses

For a list of courses offered by the Faculty of Medicine refer to the list of "Courses" offered for the Master of Science in Medicine.

## 25.19 Pharmacy

### Associate Professor and Director of Pharmacy

L.R. Hensman

The degree of Doctor of Philosophy in Pharmacy is offered to qualified candidates normally by full-time study. The **General Regulations** of the School of Graduate Studies of Memorial University of Newfoundland outlined in the current Calendar, and the Degree Regulations of the School of Pharmacy outlined below will apply. Every candidate in graduate studies shall comply with the **General Regulations**, Degree Regulations and all additional requirements of the School of Pharmacy.

### 25.19.1 Doctor of Philosophy

#### 1. Qualifications For Admission

- a. Admission to the Ph.D. program is limited and competitive. Applicants must have completed an M.Sc. Degree in Pharmacy, or its equivalent in a related discipline, from a university of recognized standing.
- b. Other students may be considered for admission to a Ph.D. provided that they have been registered in a M.Sc. Pharmacy program for a minimum of 12 months, and have demonstrated to the satisfaction of the Graduate Studies Committee of the School of Pharmacy an ability to pursue research at the doctoral level. Students wishing to transfer from the M.Sc. to the Ph.D. will have completed 6 credit hours. Prior to admittance to the Ph.D. program, a written thesis proposal will be submitted for assessment by the Supervisory Committee plus one additional faculty member. The recommendation of this Committee will be forwarded to the Graduate Studies Committee of the School of Pharmacy.
- c. On admission to the program, a Supervisory Committee shall be appointed in accordance with General Regulation **Supervision** governing the School of Graduate Studies.

#### 2. Program Of Study And Research

- a. As a minimum, each candidate shall successfully complete 6 credit hours as well as Pharmacy 6999 (Pharmacy Research Seminar). A minimum grade of 65% will be required in each course. Candidates shall complete additional undergraduate courses in Pharmacy or other related areas where the Supervisory Committee considers there to be a deficiency in the academic record. Candidates may select these courses in consultation with the Supervisory Committee. However, it will be the primary responsibility of the Supervisory Committee to ensure that deficiencies in the academic record are rectified.
- b. All candidates must submit a thesis proposal to the Supervisory Committee for approval no later than the second semester of study after admission to the program.
- c. All candidates must complete a comprehensive examination on or before the end of the sixth semester of study after admission to the program. The comprehensive examination will consist of two components: a written examination and an oral examination. The oral examination will normally be held no later than two weeks after successful completion of the written examination.
- d. A Comprehensive Examination Committee shall be appointed in accordance with General Regulation **Comprehensive Examination**. The Committee will be responsible for preparing the questions for the written and oral examinations and evaluating the candidate's performance in the subject area. The Committee will consist of the Dean of Graduate Studies (or delegate), the Supervisor, and three other members, one of whom may be a member of the Supervisory Committee. All shall be voting members of the Committee except the Dean of Graduate Studies (or delegate).
- e. Successful completion of the Ph.D program will require formal examination of the written thesis and an oral defence of the

research, as prescribed in the General Regulation **Theses and Reports**. Final approval of the thesis shall be the responsibility of the School of Graduate Studies.

### Courses

A selection of the following graduate courses will be offered to meet the requirements of candidates as far as the resources of the School will allow. Permission of the instructor and the Graduate Studies Committee of the School of Pharmacy is required for admission to any graduate Pharmacy course.

6000 Medicinal Chemistry  
 6001 Advanced Physical Pharmacy  
 6002 Dosage Form Design & Novel Drug Delivery Systems  
 6003 Pharmacokinetic Modelling  
 6004 Principles of General Pharmacology  
 6005 Toxicology of Therapeutic Agents and Chemicals  
 6100-6104 Special Topics Courses  
 6999 Pharmacy Research Seminar

## 25.20 Physics and Physical Oceanography

### Professor and Head of the Department

J. Whitehead

The following Departmental Regulations are supplementary to the **General Regulations** governing the M.Sc. and Ph.D. degrees. A thorough familiarity with the latter Regulations should be regarded as the prerequisite to further reading in this section.

The Department of Physics and Physical Oceanography compiles, and regularly reviews, a brochure which contains reasonably detailed descriptions of currently active research projects, as well as a comprehensive listing of recent research publications, and other material which may be of interest to prospective graduate students.

### 25.20.1 Doctor of Philosophy

The degree of Doctor of Philosophy is offered in Atomic and Molecular Physics, in Physical Oceanography, and in Condensed Matter Physics.

1. A program of study for the Ph.D. degree in Atomic and Molecular Physics, Condensed Matter Physics, or Physical Oceanography shall normally include a minimum of 9 graduate credit hours, beyond those required for the M.Sc. degree. However, depending on the student's background and area of specialization, more or fewer graduate and/or undergraduate courses may be required.
2. A Comprehensive Examination (as prescribed under General Regulation **Comprehensive Examinations**) shall be an oral one, and may include the presentation of a written research proposal.

### Courses

A selection of the following graduate courses will be offered to meet the requirements of candidates, as far as the resources of the Department will allow:

6000 Condensed Matter Physics I  
 6001 Condensed Matter Physics II  
 6002 Superconductivity  
 6003 Path Integral Techniques in Condensed Matter Physics  
 6010-19 Special Topics in Condensed Matter Physics  
 6040 Biophysics  
 6060-69 Special Topics in Interdisciplinary Areas  
 6200 Nonlinear Dynamics  
 6308 Ocean Dynamics I  
 6309 Ocean Dynamics II  
 6310 Physical Oceanography  
 6313 Physical Fluid Dynamics  
 6315 Polar Oceanography  
 6316 Ocean Measurements and Data Analysis  
 6317 Ocean Acoustics  
 6318 Numerical Modeling  
 6319 Climate Dynamics  
 6320 Turbulence  
 6321 Coastal Oceanography  
 6322 Stratified Fluids  
 6323 Stability Theory  
 6324 Models in Ocean Ecology  
 6360-69 (excluding 6363) Special Topics in Physical Oceanography  
 6363 Laboratory Experiments in Geophysical Fluid Dynamics  
 6400 Statistical Mechanics  
 6402 Theory of Phase Transitions  
 6403 Stochastic Processes, Time-Dependent and NonEquilibrium Statistical Mechanics  
 6502 Electrodynamics  
 6720 Theory of Molecules  
 6721 Molecular Spectroscopy  
 6722 Light Scattering Spectroscopy  
 6730 Molecular Theory of Liquids and Compressed Gases  
 6740 Physics of Atomic Collisions  
 6760-69 Special Topics in Atomic and Molecular Physics  
 6800 Group Theory  
 6810-19 Special Topics in Theoretical and Mathematical Physics  
 6850 Quantum Mechanics I  
 6851 Quantum Mechanics II  
 6910-19 Special Topics in Experimental and Applied Physics

**Table of Course Restrictions - Physics and Physical Oceanography**

Credit may be obtained for only one course from each of the pairs of courses listed in this table.

Present Course	Former Course	Present Course	Former Course
6000	6050	6318	6304
6001	6051	6321	6303
6002	6822	6321	6304
6003	6820	6323	6303
6200	6821	6402	6401
6308	6312	6403	6401
6309	6311	6403	6824
6313	6301	6502	6500
6316	6302	6502	6501
6317	6823	6722	6790

Members of the department carry out research in several areas of experimental and theoretical physics, including atomic and molecular physics, condensed matter physics, physical oceanography, theoretical geophysics and applied nuclear physics. In atomic and molecular physics, there are experimental programs in collision-induced infrared absorption spectroscopy, electron emission spectroscopy of simple molecules, molecular ions and free radicals, laser-induced fluorescence spectroscopy, and Raman spectroscopy, and theoretical work on atomic and molecular collisions. The work in condensed matter physics includes experimental programs in solid state nuclear magnetic resonance on systems of biophysical interest, Raman spectroscopy of lipid bilayers and membranes, studies of phase transitions using Brillouin and Raman spectroscopy, studies of instabilities and pattern formation in simple fluid dynamical systems, and spectroscopic studies of molecular crystals. Theoretical condensed matter physics research involves studies of magnetism, superconductivity, and the statistical mechanics of polymers and lipid bilayers. The Physical Oceanography group carries out field and laboratory research on several projects which take advantage of Newfoundland's unique oceanographic environment, using acoustic and other remote sensing techniques. These include studies of circulation on the Newfoundland and Labrador shelves, Labrador current dynamics, fjord dynamics, submarine canyons and sediment transport dynamics in the nearshore zone and on the shelf. Theoretical oceanographic studies involve the modelling of ocean circulation, gravity wave phenomena and other aspects of ocean dynamics. Research in theoretical geophysics is concentrated on whole-Earth dynamics, with special emphasis on the physics of the liquid core (the Earth's "third ocean") as inferred from its wave spectrum and the associated momentum transfer to the deformable solid parts of the Earth. In nuclear physics, research is done on the atmospheric concentrations of radioactive elements and on dosimetry for medical applications.

Note: For Geophysics, see Earth Sciences

## 25.21 Psychology

### Professor and Interim Head of the Department

G.M. Martin

The degree of Master of Science is offered in Experimental Psychology. Interested students should also see the Master of Science in Cognitive and Behavioural Ecology. The degree of Doctor of Philosophy is offered in Experimental Psychology. Interested students may wish to consult the section in the Calendar describing the Doctor of Philosophy in Cognitive and Behavioural Ecology program.

### Applications

1. All applicants are required to submit results from the General section of the Graduate Record Examinations.
2. At least one letter of reference should come from someone who is familiar with the applicant's research capability.
3. Applicants applying to programs in Cognitive, Perception and Animal Learning are required to submit with their applications an example of their academic writing. This could include, but is not limited to, papers submitted in class, Honour's thesis, etc.

### 25.21.1 Doctor of Philosophy

1. An applicant must hold either a Master's degree or an Honours Bachelor's degree with first class standing to be considered for admission. The program of study will be specified at the time of admission. Decisions on (a) whether to include courses in the program, and if so, (b) which specific courses are to be included will be based on the student's background and the proposed thesis topic.

#### 2. Comprehensive Examination

The Ph.D. comprehensive in Experimental Psychology shall be taken during the first year of the student's program. The examination will consist of two parts: (1) an essay, the topic of which is different from the subject of the thesis, and (2) an oral examination which tests the candidate's ability to integrate the essay into the broad area of Psychology. The essay topic will be assigned by the Examining Committee in consultation with the student and Supervisor. The essay should not be a précis of the literature, but a critical appraisal of a subject. This should identify important unresolved issues, and where possible suggest solutions to them. Themes for questions for the oral examination will be provided to the student three weeks in advance of the examination.

### Courses

A selection of the following graduate courses will be offered to meet the requirements of candidates, as far as the resources of the Department will allow:

6000 Advanced Statistics in Psychology  
 6001 Research Design  
 6100-6114 Special Topics in Experimental Psychology  
 6200 Learning I  
 6201 Learning II  
 6203 Behavioural Pharmacology  
 6210 Behavioural Analysis of Toxins  
 6350 Behavioural Ontogeny (*Cross-listed as Biology 6350*)

6351 Behavioural Ecology and Sociobiology (*Cross-listed as Biology 6351*)  
 6355 Field Course in Animal Behaviour (*Cross-listed as Biology 6355*)  
 6400 Theory and Methods in Social Psychology  
 6401 Social Cognition  
 6402 Group Processes  
 6403 Advanced Methods in Applied Social Psychological Research  
 6404 Project in Applied Social Psychology *NOTE: This course is open only to students in the Master of Applied Social Psychology*  
 6500 Developmental Psychology I  
 6501 Developmental Psychology II  
 6502 Developmental Changes During Old Age  
 6700 Perception  
 6710 Human Information Processing  
 6720 Human Memory  
 6800 Behavioural Neuroscience I  
 6801 Behavioural Neuroscience II  
 6810 Psychometrics  
 6910 Personality  
 6990 Doctoral Seminar I  
 6991 Doctoral Seminar II  
 6992 Doctoral Seminar in Biopsychology

## 25.22 Social Work

### Associate Professor and Director

S. Birnie-Lefcovitch

### 25.22.1 Doctor of Philosophy

The degrees of Master of Social Work and Doctor of Philosophy are offered in Social Work.

Course work commences in the Spring Semester and is completed over five semesters. The program includes two Spring Semester residencies, at which time students must attend on a full-time basis, and Fall and Winter semester courses which can be taken on or away from campus.

1. An applicant for admission to the Ph.D. program in Social Work must hold a Master's degree in social work, or equivalent professional social work degree as determined by the Graduate Studies Committee of the School of Social Work. All applicants should also have a minimum of three years post-B.S.W. practice experience.
2. All Ph.D. students in the social work program must complete at least 24 credit hours in regulation graduate courses. These include:
  - a. 6 credit hours in foundation courses (7010 and 7020)
  - b. 6 credit hours in advanced practice courses (7310, 7320); or 3 credit hours in advanced practice courses (7310) and 3 credit hours on social work education (7510)
  - c. 9 credit hours on research (7411, 7421, and 7431)
  - d. 1 internship chosen from the Internships on Advanced Social Work Practice (7910), Social Work Education (7920), or Applied Social Work Research (7930).
3. Comprehensive Examination
  - a. A candidate registered in a Ph.D. program in Social Work shall normally take the Comprehensive Examination no later than the seventh semester in the program. Prior to proceeding to the Comprehensive Examination, candidates must have completed all required course work and the internship.
  - b. The Examination Committee shall be appointed by the Dean of Graduate Studies on the recommendation of the Director (School of Social Work). It shall consist of:
    - i. the Ph.D. Program Coordinator who will serve as representative of the Director of the School of Social Work and who shall occupy the Chair
    - ii. the candidate's Supervisor
    - iii. the Dean of Graduate Studies or delegate
    - iv. three other members recommended by the Director of the School of Social Work. One of these normally will be on the candidate's Supervisory Committee.

Including the Supervisor, no more than two members of the Examination Committee may be nominated from the candidate's Supervisory Committee. All members of the Examination Committee, including the Chair, but excluding the Dean of Graduate Studies or delegate, shall be voting members.
  - c. The Ph.D. Comprehensive in Social Work will consist of a written paper which has two main parts. The first part will contextualize the student's substantive area through a comprehensive analysis and discussion of its place in and development from social work theory and the profession's history. This part should demonstrate a comprehensive understanding of competing theoretical frameworks and orientations in social work and should demonstrate appreciation for historical developments generally as well as specifically to the student's substantive area of interest. The second part of the paper will focus specifically on the student's substantive area. In consultation with the Examination Committee, the student will identify an area of empirical research that may be undertaken and will prepare a written statement that includes: an introduction and formulation of at least two related research questions; a literature review that is consistent with these questions, which presents a critical evaluation of the literature, and that synthesizes the literature into the student's own theoretical framework; two competing research designs for answering the research question and a critical compare and contrast that leads to an argument for one design over the other. The focus and content of the written work will be defined by the Examination Committee in consultation with the student, and will be approved by the Ph.D. Program Coordinator in the School of Social Work. The written product shall be no less than 50 pages and not more than 75 pages. It will be orally defended. The student shall have up to one semester (13 weeks) to submit the paper.
  - d. The Ph.D. examination procedure shall be initiated by the candidate's Supervisor who will notify, in writing, the Director (School of Social Work) of the candidate's readiness. The candidate's Examination Committee will then be appointed according to section 3.b. (above).
  - e. Following the oral defence, the Examination Committee shall meet *in camera* to arrive at its conclusions. Evaluation of the

candidate will be based on the following criteria:

- i. demonstration of knowledge of social work theory, research, and issues relevant to the topic of inquiry in both the written and oral presentation.
  - ii. coherency of oral presentation and written paper (i.e. conceptualization, cogent argumentation, sufficient referencing of statements, clear writing style).
- f. The Chair shall report the results of the examination to the Dean of Graduate Studies in accordance with General Regulation **Comprehensive Examinations, Ph.D. Comprehensive Examination, 4.**
4. Ph.D. Thesis
- a. A Supervisory Committee will be appointed for each student (see General Regulation **Supervision**).
  - b. The candidate must submit a thesis proposal to the Supervisory Committee based on her/his own interest, and normally the proposal must be approved by the end of the eighth semester of the program. The proposal will be circulated to the Supervisory Committee for critical evaluation. The Chairperson of the Supervisory Committee will inform the candidate within one month of its acceptance, rejection, or acceptance with recommended changes.
  - c. If the proposal is not acceptable, the candidate will normally be permitted a second attempt. The revised proposal must be submitted within a semester. Failure to resubmit within this time period will lead to termination of the candidate's program.
  - d. The thesis shall give evidence of the candidate's ability to carry out independent and original research, develop the necessary theoretical and methodological framework and analyses and present the findings in a scholarly manner.

#### Courses

The following courses that are offered during the spring semester residency will be offered every other year, as far as the resources of the School will allow:

7010 Philosophical and Historical Base of Social Work Practice (S\*)  
 7020 Critical Thinking for Social Work Practice (S)  
 7310 Tutorial on Field of Practice (F\*\* or W\*\*\*)  
 7320 Tutorial in Advanced Social Work Practice (S)  
 7411 Philosophy of Science and Research Design (S)  
 7421 Qualitative Data Analysis (S)  
 7431 Quantitative Data Analysis (S)  
 7510 Social Work Education (S)  
 7910 Internship on Advanced Social Work Practice(F)  
 7920 Internship on Social Work Education (F)  
 7930 Internship on Applied Social Work Research (F)

\*S = Spring Semester, \*\*F = Fall Semester, \*\*\*W = Winter Semester

## 25.23 Sociology

### Professor and Head of the Department

S.H. Riggins

The Doctor of Philosophy is offered in Sociology by full-time and part-time study. Graduate courses are taught as tutorials or small seminars.

### 25.23.1 Doctor of Philosophy

1. The Ph.D. degree in Sociology is offered in accordance with the general regulations in the following areas:
  - a. Maritime Sociology
  - b. Gender
  - c. Work and Development
  - d. Any combination of these three specialties.
2. To be admitted to the program an applicant must have completed either a Master of Arts or Master of Philosophy degree or hold an equivalent qualification.
3. All Ph.D. candidates must complete a minimum of 12 credit hours in graduate courses, including the Sociology Graduate Seminar (6880), Social Theory (6150) and Methods of Sociological Research (6040) if these have not been taken previously.  
 Students specializing in Maritime Sociology must also take 6300, 6340, and 6350. Students specializing in Gender must take 6320, 6370 and 6380. Students specializing in Work and Development must take 6130, 6280, and 6360. Students combining specialties will take 9 credit hours in subjects to be determined by the Sociology graduate committee after consultation with the student's supervisor.
4. Proficiency in a second language will be required when the candidate's supervisory committee determines that knowledge of this second language is necessary for the purpose of the proposed doctoral research.
5. A written comprehensive examination, which may be followed by a supplementary oral examination, shall be completed by full-time students no later than the end of the second year of the program.  
 Normally, part-time students shall take the examination within one year of the completion of prescribed courses. In accordance with **General Regulations**, candidates must demonstrate knowledge of their special areas of research within the context of the discipline of Sociology. The examination shall consist of three parts: social theory, research methods, and a special area.
6. No more than two years after having been admitted to the program the candidate must submit a thesis proposal that is considered satisfactory by the Supervisory Committee.

#### Courses

A selection of the following graduate courses will be offered to meet the requirements of candidates, as far as the resources of the Department will allow:

6040 Methods of Sociological Research  
 6090-94 Special Area in Sociology  
 6120 Social Organization  
 6130 Social Stratification  
 6140 The Community



6150 Social Theory  
6160 Theory Construction and Explanation in Sociology  
6240 Sociology in Medicine  
6280 Social and Economic Development  
6300 Maritime Sociology  
6310 Political Sociology  
6320 Gender and Society  
6330 Science and Technology  
6340 Comparative North Atlantic Societies  
6350 Environmental Sociology  
6360 Sociology of Work  
6370 Feminist Theory and Methods  
6380 Women, Nature, Science and Technology (Cross listed as Women's Studies 6380)  
6610 Socialization  
6620 Current Topics in Social Behaviour  
6880 Sociology Graduate Seminar

Archived Previous Calendar  
Current University Calendar available at  
[mun.ca/university-calendar](http://mun.ca/university-calendar)

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Current University Calendar available at  
[mun.ca/university-calendar](http://mun.ca/university-calendar)

*SCHOLARSHIPS, BURSARIES AND AWARDS*

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# SCHOLARSHIPS, BURSARIES AND AWARDS

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**Manager**Casey, J., BA, B.Ed. *Memorial*

Hawco, C., Administrative Staff Specialist II

Peckham, C., Secretary

**Administrative Staff**

Clarke, W., Financial Aid Co-ordinator

## 1 General Information

Various types of awards are available to students of Memorial University of Newfoundland. Included are scholarships, bursaries, fellowships, studentships, prizes, medals and loans.

A scholarship is based on academic performance and is awarded to the student with the highest average meeting the conditions of the scholarship. Scholarship standing is required for all scholarships.

A bursary is based primarily on financial need and may be awarded to full-time students who have a minimum GPA of 2 (out of a possible 4) and meet the other conditions of the bursary.

An award is offered to recognize special achievements or to assist with special projects or travel. Awards may be given to students with a minimum of clear standing (as defined by the University) and meeting the other conditions of the award.

A grant is an award for which need is a prime consideration, normally with the provision that the recipient be, or remain, in good academic standing. Grants are issued at the discretion of the Director of Student Success Programs, Student Affairs and Services.

Loans are granted to students on an "ad hoc" basis with need being the prime consideration. Loans are normally repaid before the commencement of subsequent semester. Interest is charged on outstanding loans. Administration of loans is at the discretion of the Director of Student Success Programs, Student Affairs and Services.

Some scholarships and awards may be held for more than one year, but are renewable only if the student maintains scholarship standing and first class standing.

Entrance scholarships are awarded for the Fall Semester.

Unless otherwise noted, entrance scholarships are open to Canadian citizens and landed immigrants graduating from secondary schools within Canada who are admitted to Memorial University of Newfoundland on the basis of high school grades and current entrance standards and who meet the current definition of scholarship standing. They are also open to students in the above category who may not be coming directly from high school. This is limited to those who have previously matriculated, are admitted to the University on the basis of high school grades and current entrance standards and who meet the current definition of scholarship standing.

Distinct undergraduate entrance scholarships are available for international students. The values will vary but will not exceed \$3,000 each. To be considered for these scholarships, a student must be eligible to pay international undergraduate tuition fees, must register for a minimum course load of 12 credit hours in each of two semesters in their first academic year at Memorial University of Newfoundland and normally have fewer than 31 credit hours of transfer credits. These scholarships will be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid on the basis of a recommendation from the Director, Office of Student Recruitment.

The selection of candidates for international entrance scholarships will be based on a number of criteria, including academic standing (comparable to that prescribed for Newfoundland and Labrador and Canadian applicants), principals' and teachers' letters of recommendation and school and community activities.

Scholarship standing for undergraduate entrance students (who are Canadian citizens or landed immigrants graduating from secondary schools within Canada) is defined as a 75% average compiled from the final grades received in secondary school courses required for University admission. Students beginning level three who, at the end of level two, had completed at least six 3000 level credits from the list of courses covered under **UNIVERSITY REGULATIONS - Admission/Readmission to the University (Undergraduate), Applicants Who Have Followed the High School Curriculum of the Newfoundland and Labrador**, may be provisionally offered scholarships. Students graduating from High Schools in other provinces in Canada may be eligible based on corresponding criteria from their provincial secondary program. The provisional offer will remain in effect until University admission averages are determined.

Scholarship standing for undergraduate students is defined as a 75% average at the end of two out of the last three semesters in the previous scholarship year and the successful completion of not less than 30 credit hours in those two semesters. In considering students who complete more than 30 credit hours in those two semesters, the average on the actual number of credit hours taken will be reviewed. Students who fail one or more courses during the scholarship year, regardless of the number of courses completed, will not be eligible for scholarships.

For Co-op students who do not meet the above definition because of scheduled work terms, scholarship standing is defined as a 75% average over the most recent two academic semesters in the preceding four semesters in which they must have been enrolled as regular full-time Co-op students. Those who fail an academic course or work term during the four semester period will not be eligible for scholarships.

Not all students who meet the above definitions of scholarship standing will receive a scholarship.

Students transferring to Memorial University of Newfoundland from Universities/Colleges in Canada which are members of the Association of Universities and Colleges of Canada (AUCC) and who meet scholarship standing as defined by Memorial University of Newfoundland will be eligible for undergraduate scholarships in the year in which they transfer. Such students must notify the Scholarships and Awards Office in writing of their intention to transfer and provide a complete transcript for the year in question.

Awards must be taken during the scholarship year for which they are awarded and the student must be registered full time or in a recognized work term in order to receive their scholarship, unless stated otherwise in the terms of reference. The scholarship year runs from May 1st - April 30th.

A student may receive in any one scholarship year one general award of any value administered by the Senate Committee on Undergraduate Scholarships and Financial Aid or more than one award to a combined value of 1.5 times the per semester tuition for 15 credit hours. In addition, students may receive, upon recommendation of the appropriate academic unit, awards administered by the Senate Committee on Undergraduate Scholarships and Financial Aid such that the total of general and academic unit specific awards does not exceed three times the per semester tuition for 15 credit hours.

Students who have obtained scholarship standing as defined above need not apply for general scholarships. Inquiries from students with special circumstances and/or concerning scholarships with special terms should be referred to the Scholarships and Awards Office, University Centre, Room 4018, or by telephone to (709) 737-3956.

Students attending the Sir Wilfred Grenfell College in Corner Brook are eligible for all General Scholarships. You may make scholarship inquiries at the Student Affairs Office on that campus or the Scholarships and Awards Office.

Students wishing to apply for awards administered by other authorities should consult the appropriate section of the Scholarships & Awards portion of the Calendar and/or the Scholarships and Awards Office.

In addition to undergraduate awards listed herein, limited information is included concerning Studentships, Fellowships and Graduate Awards. Further inquiries may be made to the Scholarship Committee, though students are advised to consult the Heads of their Departments, the Dean of the Faculty or the Dean of Graduate Studies concerning these particular awards.

If you would like access to information on these and other post-secondary scholarships, awards, and bursaries available through the Internet, visit the Scholarships Office website at [www.mun.ca/scholarships](http://www.mun.ca/scholarships).

## 1.1 Government Assistance

Students who have a demonstrated financial need may, upon application, receive financial support from the Canada Student Loan Plan and if they so qualify, from the Provincial Government Student Assistance Program. A single application form for both sources of support is available in writing to The Student Aid Division, Department of Education, Government of Newfoundland and Labrador, Box 8700, St. John's, NL, A1B 4J6 or by telephone to (709) 729-4244.

## 2 Scholarships, Bursaries, and Awards Administered By the Senate Committee On Undergraduate Scholarships and Financial Aid for Which Entrance Students May Qualify

### ANTHONY GROUP LIMITED ENTRANCE SCHOLARSHIP

This scholarship is the result of a generous endowment to Memorial University of Newfoundland by Anthony Group Limited in memory of Robert C. Anthony B founder of Anthony Insurance Inc. and the Insurance Corporation of Newfoundland. Mr. Anthony, an inductee of the Newfoundland and Labrador Business Hall of Fame, started his career as a teacher in rural Newfoundland and placed great emphasis on the value of education. The scholarship is intended to help a deserving, high-school graduate attend Memorial University of Newfoundland who would otherwise find it difficult due to financial considerations. The value of the scholarship is full-time tuition for one semester. Eligible candidates must have graduated from a Newfoundland and Labrador high school with a minimum of 75% in Level III courses and must intend to enroll at Memorial University of Newfoundland on a full-time basis. Additional scholarships may be awarded annually as endowment fund growth permits. These scholarships will be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid.

### THE ARNOLD'S COVE, COME BY CHANCE, NORTH HARBOUR FISHERS AND NEWFOUNDLAND TRANSSHIPMENT SCHOLARSHIP

This scholarship was established by Newfoundland Transshipment Limited (NTL) as part of an agreement between them and the Fishers Liaison Committee (FLC) of the Arnold's Cove, Come By Chance and the North Harbour area. This scholarship, valued at the annual interest on the initial endowment to a maximum of \$500 per student, will be awarded on the basis of scholarship standing to a Fisher or his/her descendant(s) who is registered as a full-time student at Memorial University of Newfoundland in any year or field of study. In the event that no applicants are received from Fishers or Fishers' descendants in a given year, the scholarship may be awarded to another student from above noted geographic areas. Eligibility of applicants under the above criteria will be verified by the Fisheries Liaison Committee (FLC). Memorial University of Newfoundland is encouraged to ensure that the scholarship is alternated between communities and their eligible students. It will be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid on the basis of an application which may be obtained from the Scholarships and Awards Office, Rm. 4018, Smallwood Centre, Memorial University of Newfoundland, A1B 5S7. Completed applications must be returned to the FLC for appropriate verification.

### THE MARY L. (MOLLIE) AND PETER T. BAILEY MEMORIAL SCHOLARSHIP

This scholarship, donated by the family of the late Mary L. (Mollie) and Peter T. Bailey, has a value of at least \$500.00. It is open to students entering first-year studies who are required to move away from home to attend Memorial University of Newfoundland. In making the award, scholarship standing and need will be considered.

### THE BAIRD-STEPHENSON SCHOLARSHIP

This Scholarship, valued at \$1,000.00 is to be awarded annually to a Memorial University of Newfoundland student in any year or field of study. It is named for Mrs. Edna Baird-Stephenson and her late husband, both of whom were former members of Memorial University of Newfoundland's faculty. The Scholarship will be awarded on the basis of academic excellence.

### THE WARREN AND CATHERINE BALL MEMORIAL ENTRANCE SCHOLARSHIP

This scholarship was established in 2005 by a generous donation from the estate of Dr. and Mrs. Ball. The endowment will provide scholarships at the value of \$7,500.00 per annum for up to four years of study to students entering Memorial University of Newfoundland for the first time. The number of the annual scholarships will be based on a portion of the annual income, as per the Awards Program Spending Policy. The scholarship will be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid on the basis of scholarship standing.

### THE DONALD M. BALSOM AWARD

The Newfoundland Brain Injury Association (NBIA) has established this award to honor Donald M. Balsom, former Associate Director of Memorial University of Newfoundland's School of Continuing Education and brain injury survivor. Valued at \$500.00, it will be awarded annually to a brain injured undergraduate student who is registered either part-time or full-time, in any year or field of study at Memorial University of Newfoundland, who has some volunteer experience with the NBIA and who is in clear academic standing at the University. In the event that no applications are received from brain injured students the award may be given to a student who has made a significant contribution as a volunteer to the Brain Injured Association. In special circumstances, the award may be held for more than one year. It will be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid in consultation with NBIA as needed.

### BANK OF MONTREAL SCHOLARSHIP

These scholarships are the result of a generous endowment to Memorial University of Newfoundland by the Bank of Montreal. Interest on the fund will provide several scholarships to full-time students entering Memorial University of Newfoundland in any field of study who have scholarship standing and demonstrated financial need. These scholarships will be valued at two semesters tuition for five courses. They are renewable for up to four years provided the candidate(s) maintains first class and scholarship standing.

### THE BIRKS FAMILY FOUNDATION BURSARIES

The Birks Family Foundation has established a plan of annual contributions to the student aid funds of recognized Canadian universities for the creation of the Birks Family Foundation Bursaries.

The Bursaries are awarded by the Foundation on the recommendation of the Senate Committee on Undergraduate Scholarships and Financial Aid and are not restricted to faculty or year and may be renewed. The number and amount of such awards may vary annually, depending upon the funds available for the purpose from the Foundation.

**THE GLENN ROY BLUNDON MEMORIAL SCHOLARSHIP**

This scholarship, valued at \$500.00, has been established by the family, friends and fellow students of the late Glenn Roy Blundon, a former student of Memorial University of Newfoundland who, despite his severe physical disability, succeeded in his studies and made a significant contribution to student life. In the awarding of this scholarship, preference will be given to academically qualified students with disabilities but those enrolled in the Special Education Program may be considered when no candidates are available from the first group. A special application is required and may be obtained from the Scholarships and Awards Office, Room 4018, University Centre or by calling (709) 737-3956.

**THE GARY BOURNE MEMORIAL SCHOLARSHIP**

This scholarship is the result of an endowment to the University funded largely by donations resulting from fundraising efforts of Gary's colleagues at the Office of Financial and Administrative Services. Valued at a portion of the annual accrued interest on the endowment it will be awarded on the basis of scholarship standing to an undergraduate student who is a dependent of a current, retired or deceased staff member of Memorial University of Newfoundland. A special application is required and may be obtained from the Scholarships and Awards Office, Room 4018, University Centre or by calling (709) 737-3956.

**THE EDWARD PATRICK BROWNE MEMORIAL SCHOLARSHIPS**

In his will, Edward Browne, a distinguished and beloved member of the University community, and a life-long supporter of the growth and development of the sport of basketball at provincial and national levels, left a bequest to Memorial University of Newfoundland for the awarding of scholarships to students.

These scholarships are awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid on the advice of the Director of the School of Human Kinetics and Recreation.

**THE GREG CAMPBELL MEMORIAL ENTRANCE SCHOLARSHIP**

These scholarships are the result of a generous donation by Eleanor Swanson to commemorate the memory of her late husband, J. Gregory Campbell. Interest on the fund will provide two scholarships to full time undergraduate students entering first year of any faculty or school at Memorial University of Newfoundland. The scholarships will be awarded on the basis of scholarship standing and financial need.

**THE WILLIAM CAMPBELL MEMORIAL ALUMNI SCHOLARSHIP**

This scholarship, valued at a portion of the income on the investment, will be awarded annually to a student entering any first year program offered at Memorial University of Newfoundland. The recipient must be a graduate of Menihek High School. If the selected candidate pursues the College Transfer Program at the Labrador West Campus of the College of the North Atlantic, the scholarship may be deferred for one year on the condition that the student enters Memorial University of Newfoundland the following year. This scholarship will be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid based on scholarship standing as defined by the University.

**THE CANADIAN FEDERATION OF UNIVERSITY WOMEN BURSARIES**

Two bursaries, valued at \$1000.00 each, are offered annually by the Canadian Federation of University Women (C.F.U.W.) to female students in full-time or part-time studies. The awards are made on the basis of academic standing and financial need and are not restricted to any particular faculty or year of study. The first of these bursaries is named in memory of Dr. Edith M. Manuel, well-known Newfoundland educator and charter member of the C.F.U.W., who died in 1984. The second is named for long-time C.F.U.W. member, Olga Anderson.

**THE WILLIAM J. AND FLORENCE CAREW LABRADOR STUDENT SCHOLARSHIP/BURSARY**

A Scholarship/Bursary, established in 1975 by Miss Helen F. Carew, was renamed in 1990 in memory of her parents William J. and Florence Carew and is valued at \$600.00 annually. The award shall be made to a student from Labrador entering Memorial University of Newfoundland. In making the award, need as well as academic standing, will be considered.

**CORPORATE EXPRESS SCHOLARSHIP**

This scholarship is made possible by a generous four year commitment by Corporate Express Canada, the world's largest business to business supplier of office supplies, information products and office furniture. Five scholarships, valued at \$1000.00 each will be awarded to students entering Memorial University of Newfoundland who are registered for full-time studies. These scholarships will be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid on the basis of scholarship standing.

**THE DR. CLARENCE B. CRUMMEY MEMORIAL ENTRANCE SCHOLARSHIP**

This scholarship is in memory of the late Dr. Clarence Crumme, Jubilee Scholar of the first graduating class of Memorial University College 1927. It is valued at a minimum of \$1,000.00 annually and will be awarded to an entering student to Memorial University of Newfoundland from the Bonavista Bay area. It will be awarded based on scholarship standing.

**THE REVEREND DOCTOR LEVI CURTIS BURSARY**

This bursary has a value of at least \$200.00 and is awarded each year to a student who is a candidate for the ministry of the United Church, a child of a minister of the United Church, or the child of a needy United Churchman. A special application is required and may be obtained from the Scholarships and Awards Office, Room 4018, University Centre or by calling (709) 737-3956.

**THE CRAIG L. DOBBIN/CHC HELICOPTER CORPORATION SCHOLARSHIP**

This scholarship is the result of a generous donation to Memorial University of Newfoundland by Mr. Craig L. Dobbins/CHC Helicopter Corporation. The Scholarship will be valued at approximately \$10,000.00 - \$15,000.00 renewable for up to four additional years assuming the candidates meet the University's renewal criteria. The scholarship will be open to undergraduates who are dependants of full-time permanent employees with CHC Helicopter Corporation, its wholly-owned subsidiaries and operating divisions. Effective 2003-2004 renewals will be available but new scholarships will not be available.

**THE CHARLOTTE PENWELL DOLIMOUNT MEMORIAL SCHOLARSHIP**

The scholarship is valued at \$5,000, and is provided via a contribution to Memorial University of Newfoundland by Mr. Darryl Fry. It will be awarded on the basis of scholarship standing and need to graduates of high schools in Grand Bank and Fortune. Where possible preference will be given to students planning to do a Bachelor of Education at Memorial University of Newfoundland.

**THE FRASER EDISON SCHOLARSHIP**

This scholarship is the result of a donation to the *Opportunity Fund* in 1999 by Mr. Fraser Edison. It will be valued at the annual interest on the endowment and will be awarded to an undergraduate student who has a recognized physical disability. A special application is required and may be obtained from the Scholarships and Awards Office, Room 4018, University Centre or by calling (709) 737-3956. The scholarship will be awarded on the basis of scholarship standing to a student in any year or field of study.

**THE ERNEST JOSEPH ENNIS SCHOLARSHIP**

This scholarship was established by Ernest Joseph Ennis of Merasheen, Placentia Bay, retired School Supervisor, in memory of Dr. Hatcher, Ms. Monnie Mansfield, and Professors Fraser, Gillingham, and Andrews of the Memorial University College. This scholarship, valued at the accrued interest, shall be awarded to an entrance student of scholarship standing with preference to a student planning to study Economics or Political Science.

**THE FACILITIES MANAGEMENT UNDERGRADUATE SCHOLARSHIP**

This scholarship fund is the result of an endowment which began in 1996 as a part of the *Opportunity Fund* Campaign. The fund will provide one or more scholarships valued at a minimum of \$500 each to students who are children, grandchildren, nieces, nephews, brothers, sisters or spouses of current or retired employees of the Department of Facilities Management, Memorial University of Newfoundland. Preference in awarding the scholarship(s) will be given to entrance students but undergraduates may also qualify. The scholarship(s) will be awarded on the basis of scholarship standing but in the case of ties between candidates, need may be used as a determining factor. A special application will be required and may be obtained from the Scholarships and Awards Office, Room 4018, University Centre, telephone(709) 737-3956.

**FISHERY PRODUCTS INTERNATIONAL LTD. ENTRANCE SCHOLARSHIP**

This scholarship, valued at \$1000.00, has been established by Fishery Products International Ltd. The deadline date for applying is September 24th. In order to qualify candidates must:

- a. be dependents of employees of Fishery Products International Ltd.;
- b. be enrolled as full-time students in first year studies;
- c. possess scholarship standing as defined by the University; and
- d. hold no other concurrent scholarship.

The award will be made on the basis of academic merit; a copy of the candidate's high school transcript must accompany the application. Applications may be obtained in writing to the Head Office, Fishery Products International Ltd., 70 O'Leary Avenue, P.O. Box 550, St. John's, NL, A1C 5L1 or to the Scholarships and Awards Office, Room 4018, University Centre, Memorial University of Newfoundland, or by telephone to (709) 737-3956.

**THE DANIEL FRAAD JR. MEMORIAL ENTRANCE SCHOLARSHIP**

This scholarship was established by Jack and Susan Rudin in memory of Mr. Fraad who ran Allied Aviation at Gander International Airport for many years before his death. Valued at a minimum of \$3,000, it will be awarded annually to an entrance student(s) on the basis of scholarship standing.

**THE DR. G.A. FRECKER MEMORIAL ALUMNI BURSARIES**

The Memorial University of Newfoundland Alumni Association has established, from its Annual Fund, five bursaries named in honour of the late Dr. G.A. Frecker, Chancellor, Memorial University of Newfoundland, 1971-79, and valued at \$500.00 each. Four of the bursaries are tenable at the St. John's campus and one at the Sir Wilfred Grenfell College at Corner Brook. The bursaries will be awarded annually to full-time students in any faculty or year on the basis of academic standing and financial need.

**THE CLARICE DIAMOND FRY MEMORIAL SCHOLARSHIP**

The scholarship is valued at \$5,000, and is provided via a contribution to Memorial University of Newfoundland by Mr. Darryl Fry. It will be awarded on the basis of scholarship standing and need to graduates of high schools in Glovertown and Eastport. However, preference will be given to students who are residents of Glovertown. Where possible preference will be given to students planning to do a Bachelor of Education degree at Memorial University of Newfoundland.

**THE FRY FAMILY FOUNDATION JUNIOR LEADERSHIP AWARD**

This award is the result of the generosity of the Fry Family Foundation. Valued at \$1,200.00, it is awarded annually to Grade Nine students from Newfoundland and Labrador schools. Award recipients will receive \$200.00 immediately (i.e. at the end of grade nine) and the remaining \$1,000.00 upon entry to Memorial University of Newfoundland at the end of Level III. The award will also provide the student with opportunities for involvement in leadership development and community services activities. Schools with grade nine graduating classes of forty-five (45) or more student are eligible to nominate candidates. This award will be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid upon recommendation from the school Guidance Councilor or Principal.

**FRY FAMILY FOUNDATION ST. JOHN BOSCO SCHOLARSHIP**

One or more scholarships valued up to \$5,000.00 annually, will be awarded to Level III students from Shea Heights or Blackhead, NL. In awarding the scholarship financial need and academic standing will be considered. The scholarship will be awarded to students who plan to attend Memorial University of Newfoundland in the fall semester immediately following their completion of high school. The scholarship will be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid.

**THE GENERAL MOTORS UNDERGRADUATE SCHOLARSHIP**

This scholarship was established by General Motors of Canada Limited with contributions to the University's *Opportunity Fund* Campaign. Interest from the fund will provide one or more scholarships to support individuals who qualify as Native People, members of a Visible Minority and/or Physically Disabled. It will be awarded to students in any year or faculty or school at Memorial University of Newfoundland. It will be awarded on the basis of scholarship standing. A special application is required and may be obtained from the Scholarships and Awards Office, Room 4018, University Centre or by calling (709) 737-3956.

**THE JOAN HAIRE MEMORIAL SCHOLARSHIP**

This scholarship is the result of an endowment which began in 1997 as a part of the *Opportunity Fund Campaign*. The fund will provide a scholarship valued at a minimum of \$500 to students who are children, grandchildren, nieces, nephews or spouses of current, retired or deceased employees or former employees with a minimum of five years service in the Department of Technical Services, Memorial University of Newfoundland. Preference in awarding the scholarship will be given to entrance students but undergraduates may also qualify. The scholarship will be awarded on the basis of scholarship standing but in the case of ties between candidates, need may be used as a determining factor. A special application will be required and may be obtained from the Scholarships and Awards Office, Room 4018, University Centre, telephone(709) 737-3956.

**THE FREDERICK J. HANCOCK SCHOLARSHIP**

This scholarship is the interest on a sum of money donated to the University by Frederick J. Hancock, former Sergeant of the Newfoundland Constabulary who served as a member of the Force for twenty-five years until his retirement in 1963. Preference in the awarding of this scholarship will be given to sons and daughters of active, retired or deceased members of the Royal Newfoundland Constabulary. Candidates must be enrolled in full-time studies at the University and possess scholarship standing. When no candidates can be found from the above category, the scholarship may be awarded to any full-time student on the basis of academic merit. A special application is required and may be obtained from the Scholarships and Awards Office, Room 4018, University Centre or by calling (709) 737-3956.

**THE DR. LESLIE HARRIS MEMORIAL UNIVERSITY ALUMNI ASSOCIATION SCHOLARSHIPS**

Memorial University of Newfoundland and its Alumni Association have established these scholarships to honor former University President, Dr. Leslie Harris, and to recognize excellence. Several scholarships, valued at a minimum of \$16,000.00 (\$4,000.00 annually for up to 4 years) will be awarded annually and may be renewed if first class and scholarship standing are maintained. These scholarships are tenable in all undergraduate programs at the University and will be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid.



**THE A. HARVEY & COMPANY LIMITED SCHOLARSHIP PROGRAM**

On the occasion of its 125th anniversary, A. Harvey & Company Limited established this scholarship tenable at Memorial University of Newfoundland and valued at \$1,500.00. The deadline date for applying is the last Friday in July. In order to qualify candidates must:

- a. Be a dependent or spouse of employees of the company;
- b. Be enrolled as a full-time student;
- c. Posses scholarship standing as defined by the University; and
- d. Hold no other concurrent scholarship.

Preference will be given to entrance students; however, if there is no eligible candidate enrolled in first year studies, then the scholarship may be awarded to a senior undergraduate student attending Memorial University of Newfoundland who fulfills the above criteria. In deciding between candidates of equal academic attainment need will be the determining factor.

Further information and application forms are available in writing from A. Harvey & Company Limited, 87 Water Street, P.O. Box 5128, St. John's, NL, A1C 5V6

**THE JUDGE HIGGINS MEMORIAL ENTRANCE SCHOLARSHIP**

This scholarship was established in memory of the late Judge William Higgins and is valued at a portion of the annual interest on the endowment. It will be open to all students entering first-year studies at Memorial University of Newfoundland. In making the award, scholarship standing and financial need will be considered. It will be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid.

**THE IMPERIAL TOBACCO CANADA ENTRANCE SCHOLARSHIP**

This scholarship was made possible by a donation in 1998 to Memorial University of Newfoundland by Imperial Tobacco Canada in support of the *Opportunity Fund Campaign*. The scholarship is valued at a minimum of \$2,000.00 annually. It will be awarded to an entrance student on the basis of scholarship standing.

**THE IRON ORE COMPANY OF CANADA UNDERGRADUATE SCHOLARSHIP**

These Scholarships are the result of a generous donation to *The Opportunity Fund Campaign* by the Iron Ore Company of Canada. Ten scholarships, valued at \$5,000.00 each annually, will be awarded to permanent residents of Labrador City (somebody who has lived in Labrador City for a minimum of twelve months prior to attending Memorial University of Newfoundland) who are in first or second year studies of any undergraduate program at Memorial University of Newfoundland. If ten scholarships cannot be awarded in a given year, the number available will increase accordingly in the following year. These scholarships will be awarded on the basis of scholarship standing.

**THE IRVING OIL LIMITED SCHOLARSHIPS**

These scholarships are the result of a generous endowment to Memorial University of Newfoundland by Irving Oil Limited in 1999 as a part of the *Opportunity Fund Campaign*. Interest on the endowment will provide several scholarships to full-time students entering Memorial University of Newfoundland in any field of study who have scholarship standing. Where two or more students are tied academically, financial need will be the determining factor. Two scholarships, valued at \$6,000.00 each, will be awarded annually to the general entering student population and, as funds permit, one or more scholarships valued at approximately \$3,000.00 each will be awarded with preference to students who are dependents of full-time permanent employees of Irving Oil Limited. The latter will be split equally between the Eastern and Western regions of the province with Grand Falls-Windsor providing the boundary line. Communities west and north of Grand Falls-Windsor (including Labrador) will be considered part of the western region and those east and south of Grand Falls-Windsor (including Grand Falls-Windsor itself) will be considered part of the eastern region. If in a given year there are not enough eligible candidates from the employees' dependant pool, these scholarships will also be open to the general entrance student population. All candidates must be residents of Newfoundland and Labrador (a person who has maintained permanent residence in the province for a period of 12 months immediately prior to enrolment at Memorial University of Newfoundland).

**THE P.F. KEARNEY MEMORIAL SCHOLARSHIP**

A minimum of two scholarships will be provided annually from the interest on a bequest to the University in memory of Mr. P.F. Kearney. The scholarships will be awarded to students attending Memorial University of Newfoundland from schools within geographic boundaries of the Exploits Valley Integrated and Exploits White Bay Roman Catholic School Boards. Preference will be given to entering students but in the event that no entering students are eligible in a given year they may be awarded to undergraduates in any year or field of study on the basis of scholarship standing.

**KEY TAG SCHOLARSHIPS**

Up to three scholarships, valued at \$500.00 per annum, are donated by the Newfoundland Branch of the War Amputees of Canada, and are to be known as the Key Tag Scholarships. These scholarships are awarded annually to amputee students in any year or field of study at Memorial University of Newfoundland. In the event that no applications are received from amputee students, the Committee may consider other physically disabled students. In making the awards, financial need, initiative and scholastic achievement will be considered. In special circumstances, the scholarships may be held for more than one year. A special application is required and may be obtained from the Scholarships and Awards Office, Room 4018, University Centre or by calling (709) 737-3956.

**THE KILLAM AMERICAN UNDERGRADUATE SCHOLARSHIP**

This scholarship fund is the result of gifts to Memorial University of Newfoundland in memory of Isaac Walton Killam of Nova Scotia made by the charitable trusts of his sisters in Massachusetts. The fund will provide one or more non-renewable entrance scholarships, valued up to \$3,000.00 (Canadian), to undergraduate students from the United States wishing to study at Memorial University of Newfoundland. Eligible candidates will be citizens of the United States who meet current admission requirements to Memorial University of Newfoundland and demonstrate scholarship standing comparable to that prescribed for Newfoundland and Labrador and Canadian applicants. Recipients will be required to have fewer than 31 credit hours of transfer credits and to register at Memorial University of Newfoundland as full-time undergraduate students. The scholarship(s) will be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid on the basis of a recommendation from the Director of Student Recruitment.

**THE IRIS KIRBY MEMORIAL SCHOLARSHIP**

This award, valued at \$650.00 annually, has been established by the friends and colleagues of the late Iris Kirby. Iris was an active feminist and advocate of encouraging women to develop their fullest potential. The scholarship is open to women enrolling in full-time undergraduate studies at Memorial University of Newfoundland who are entering or returning after at least five years out of full-time study. Applicants should have been resident in Newfoundland for at least one year before applying. The scholarship will be awarded in the Winter semester on the basis of the Fall semester's results. In deciding on candidates of equal academic attainment, a commitment to the goal of an equal status for women in our society will be considered. A special application is required and may be obtained from the Scholarships and Awards Office, Room 4018, University Centre or by calling (709) 737-3956.

**KOREA VETERANS' ASSOCIATION SCHOLARSHIP**

Twenty-six thousand, seven hundred and ninety-one (26,791) Canadians served in the Korean Theatre between the beginning of hostilities in 1950 and the signing of the cease-fire in 1953. Another 7,000 served between the cease-fire and the end of 1955. This

scholarship was established to honour the men and women of the various Canadian Military Units that served in the United Nations Forces during that period of time. One scholarship of \$500 is awarded annually to a student who meets the following criteria: A full-time first year student at Memorial University of Newfoundland who is the child or grandchild of a Canadian Korea War Veteran and who has scholarship standing. In a year when there is no eligible child or grandchild in first year, the scholarship may be awarded to a child or grandchild beyond first year studies. If there is still no eligible student, the scholarship may be awarded to any first year student at Memorial who has scholarship standing. This scholarship will be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid on the basis of an application which is available from the Scholarships and Awards Office, Rm. 4018, University Centre.

**THE LABRADOR FISHERMEN'S UNION SHRIMP COMPANY MEMORIAL SCHOLARSHIP**

These scholarships, two valued at \$2,500.00 each annually, were created in honour of the six crew members who died in the 1990 airplane crash in Greenland. They will be awarded to entrance students from Coastal Labrador on the basis of scholarship standing. The first scholarship will be to a student from the Red Bay to Lance au Clair area and the second one to a student from the Lodge Bay to Cartwright area.

**THE LOCKE'S ELECTRICAL LIMITED 50TH ANNIVERSARY SCHOLARSHIP**

This scholarship is the result of an endowment established by Locke's Electrical Limited, Corner Brook, on the occasion of their 50th anniversary. Valued at the interest on the endowment, it will be awarded on the basis of scholarship standing to an undergraduate student in any year of study who is a child or grandchild of a current or retired staff member of Locke's Electrical Limited or one of its affiliates. If the scholarship is not awarded in one year then two may be awarded the following year. An application is required and may be obtained from, and returned to, Locke's Electrical Limited, Corner Brook.

**THE THELMA MARSH SCHOLARSHIP**

This scholarship is a result of an ongoing gift to Memorial University of Newfoundland by Mrs. Thelma Marsh of St. John's. The scholarship, valued at \$2,000.00 annually, is to be awarded to an entrance student from Newfoundland and Labrador. It will be awarded on the basis of scholarship standing and financial need.

**THE MEMORIAL UNIVERSITY OF NEWFOUNDLAND 50th ANNIVERSARY SCHOLARSHIPS**

These scholarships are a result of donations made to the Memorial University of Newfoundland *Opportunity Fund Campaign*. Established in 1999, they are awarded annually to students entering the University in Fall semester who have received a provincial government scholarship. The University will offer a scholarship of matching value to students who receive The Junior Jubilee, The Constable W. C. Moss, The Centenary of Responsible Government and the Provincial Electoral District Scholarships.

**THE MEMORIAL UNIVERSITY OF NEWFOUNDLAND ALUMNI ENTRANCE SCHOLARSHIP**

This scholarship is made possible by a donation from the Memorial University of Newfoundland Alumni Association. The scholarship is valued at \$5,000.00 per year and is renewable to a maximum of an additional four years provided first class and scholarship standing are maintained. The scholarship is tenable in all undergraduate programs at this University.

**MEMORIAL UNIVERSITY OF NEWFOUNDLAND ENDOWMENT SCHOLARSHIPS**

These scholarships, established by Memorial University of Newfoundland, are awarded annually to students in any year or faculty with approximately 50% of those awarded in a given year allocated for Entrance Students. The number and value of the annual scholarships vary depending on the interest earned. They are awarded on the basis of scholarship standing.

**THE MEMORIAL UNIVERSITY OF NEWFOUNDLAND FACULTY ASSOCIATION SCHOLARSHIP FUND**

The Memorial University of Newfoundland Faculty Association has established a trust fund to provide scholarships and bursaries to needy students in good academic standing. Assistance from this fund is available to entering students as well as to those further along in their studies and may be re-applied for in subsequent years. The first of the MUNFA Scholarships awarded each year is the Ditte Koster Memorial Scholarship. This award honours the late Ditte Koster who, up to the time of her death, was a professional librarian at the University. As a contribution to the *Opportunity Fund* in 1999, the Faculty Association pledged to pay the University the interest from their trust for the period January 1, 2000 to March 31, 2004. The matching money from this pledge will be contributed to the University's general Scholarship Endowment Fund allowing the University to award additional general scholarships.

**THE MEMORIAL UNIVERSITY OF NEWFOUNDLAND INTERNATIONAL ENTRANCE SCHOLARSHIP**

These scholarships have been established by Memorial University of Newfoundland as part of an agreement by the Board of Regents, in May 2003, that a portion of the tuition fees for international undergraduate students would be set aside for International Scholarships. The values will vary but will not exceed \$3,000.00 each annually. To be considered for these scholarships, a student must be eligible to pay the full international undergraduate fee, must register for at least four courses in each of two semesters in their first academic year at Memorial University of Newfoundland, should normally have fewer than 31 credit hours of transfer credits and meet scholarship standing (comparable to that prescribed for Newfoundland and Labrador and Canadian applicants). These scholarships will be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid on the basis of a recommendation from the Director, Office of Student Recruitment.

**THE G.H. MORGAN AND SON SCHOLARSHIP**

This scholarship is the interest on a sum donated by a member of the Morgan Printing Co., Ltd., in memory of the founders of the firm, the late G.H. Morgan, Esq., and his son, the late Albert MacGregor Morgan, Esq. At the request of the donor, it is awarded annually based on the results of the University admission average. It will be awarded with first preference to a student from Coley's Point. If no eligible student from Coley's Point can be identified, preference will be given to students from (a) Bay Roberts, (b) the entire district of Port-de-Grave. A special application is required and may be obtained from the Scholarships and Awards Office, Room 4018, University Centre or by calling (709) 737-3956.

**THE JACOB AND FLORAL MORGAN SCHOLARSHIP FUND**

This fund has been established by relatives and friends of the late Jacob Morgan, a teacher for thirty years in the outports of this province, and of his wife Floral. One or more scholarships, valued at not less than \$2,500.00 each will be awarded annually. Preference will be given to students from the smaller outports, primarily to those who are entering Memorial University of Newfoundland for the first time.

**THE JULIA E. MORGAN SCHOLARSHIP FUND**

This fund has been established by relatives and friends of the late Julia E. Morgan, school teacher and University Extension Services field worker. One or more scholarships valued at not less than \$2,500.00 each will be awarded annually. Preference will be given to students from the smaller outports, primarily to those who are entering Memorial University of Newfoundland for the first time.

**THE M.O. MORGAN ENTRANCE SCHOLARSHIPS**

These scholarships, tenable at Memorial University of Newfoundland and valued at a minimum of \$2,000.00 each, are open to entrance students. They have been funded in part by a donation received from the Albatross Hotel of Gander and the Mount Peyton Hotel of Grand Falls. They will be awarded on the basis of academic excellence.

**THE EDWARD G. MULLINS MEMORIAL SCHOLARSHIP**

This scholarship valued at \$500.00 annually has been established by the Newfoundland and Labrador Branch of the Kidney Foundation

of Canada. It honours the memory of the late Edward G. Mullins who had kidney disease and was a dedicated volunteer of the Foundation. Preference will be given to applicants who have kidney disease, who have completed a minimum of 18 credit hours over 2 semesters in the previous scholarship year with a minimum average of 75% in the courses which comprise those credit hours and are enrolled full time at the University. However, if in a given year such an applicant(s) is not available, dependents of someone who has/had kidney disease may qualify. Such applicants must be enrolled full time at Memorial University of Newfoundland and have scholarship standing. In deciding on candidates of equal academic attainment from the latter group, need may be the determining factor. In some cases the scholarship may be held for more than one year. A special application is required and must be submitted to the scholarship office. Applications may be obtained in writing to The Kidney Foundation of Canada, Scholarships and Awards Office Newfoundland & Labrador Branch, Room 4018, University Centre, P.O. Box 7342, Memorial University of Newfoundland, St. John's, NL, A1E 3Y5, or by telephone to (709) 753-8999 or (709) 737-3956.

#### **THE MUNSU UNDERGRADUATE SCHOLARSHIP**

This scholarship fund is the result of an endowment which began in 1996 as a part of the *Opportunity Fund Campaign*. The fund will provide a scholarship valued at the annual interest on the endowment, to students who are children, grandchildren, or spouses of current (worked a minimum of 15 of the last 24 months) or retired employees of MUNSU, Memorial University of Newfoundland or of previous employees who had a minimum of ten years of service to MUNSU. In the event that there are no eligible candidates from the above group in a given year the scholarship will be open to nieces or nephews of current, retired or previous employees of MUNSU (as per above). It will be open to entrance students as well as undergraduates. The scholarship is not renewable and individuals will not normally hold the scholarship more than once unless there is no other eligible candidate in a given year. The scholarship will be awarded on the basis of scholarship standing but in the case of ties between candidates, need may be used as a determining factor. A special application will be required and may be obtained from the Scholarships and Awards Office, Room 4018, University Centre, telephone (709) 737-3956.

#### **HARVEY AND DORIS MURCELL SCHOLARSHIP**

This scholarship has been established from funds donated by Harvey and Doris Murcell. Scholarships of at least \$1,000.00 shall be awarded under the following conditions:

- a. A scholarship to two entrance students who are residents of Harbour Grace who attended High School in Conception Bay North.
- b. Four scholarships to students of any year from high schools in the Conception Bay North area.
- c. Other scholarships as the fund will bear.

The scholarships shall be awarded based on scholarship standing.

#### **NEWFOUNDLAND RANGER FORCE (1935-50) SCHOLARSHIP**

This scholarship valued at not less than \$1,000.00, is the interest on a sum of money donated to Memorial University of Newfoundland by the Newfoundland Ranger Force (1935-49) Association. The Scholarship shall be awarded to a student entering first year of studies at Memorial University of Newfoundland.

#### **THE NORTH ATLANTIC REFINING LTD. ENTRANCE SCHOLARSHIP**

This Scholarship fund is the result of a donation to the *Opportunity Fund Campaign* in 1998 by North Atlantic Refining Limited. It will provide eleven scholarships in the amount of \$2,000.00 each and one scholarship valued at \$3,000.00. One scholarship will be awarded to entrance students graduating from each of the five high schools in the Come-By-Chance area - within 50km radius of Come-By-Chance (Swift Current to Little Hearts Ease and Clarenville to Long Harbour). The remaining seven will be awarded to entrance students graduating from other high schools in the province. They will be awarded on the basis of scholarship standing.

#### **THE ELSIE AND STEPHEN O'NEILL BURSARY**

The children of Elsie and Steve O'Neill established this bursary in appreciation of their parents' support and encouragement toward their higher education. The bursary, will be valued at \$500 annually and will be awarded to a single mother with first preference to a current part-time undergraduate student. She must also have been enrolled part-time for two or more semesters prior to the semester in which the scholarship was awarded and have maintained a B average in those semesters. If no student meeting the above criteria can be identified, the bursary will be awarded to an undergraduate single mother who is currently registered at the university (part-time or full-time), who meets the financial need criteria and who has maintained a B average in the courses completed in the previous scholarship year. A special application is required and may be obtained from the Scholarships and Awards Office, Room 4018, University Centre or by calling (709) 737-3956.

#### **THE FLORENCE O'NEILL SCHOLARSHIPS**

An endowment donated to the University by Florence O'Neill, Ed.D., C.M., LL.D., honorary graduate of Memorial University of Newfoundland, distinguished for her contribution to the fields of adult education and community development, will fund annual scholarships valued up to \$1,000.00 each. These awards will be made available to full-time undergraduate students, preferably to those from rural Newfoundland and Labrador, on the basis of scholarship standing. One shall be given annually to a student attending the Sir Wilfred Grenfell College in Corner Brook.

#### **THE DR. HUGH O'NEILL ENTRANCE SCHOLARSHIP**

These scholarships are the result of a generous donation to Memorial University of Newfoundland by The O'Neill Foundation. Four scholarships valued at \$1,000.00 each will be awarded annually to full-time undergraduate students entering first year of any faculty at Memorial University of Newfoundland. The scholarships will be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid on the basis of scholarship standing and financial need.

#### **THE R.A. PARSONS SCHOLARSHIP FUND**

The purpose of this fund is to provide scholarships to students in good academic standing and in proven financial need. There are no restrictions as to year or field of study.

#### **THE SELBY PARSONS MEMORIAL SCHOLARSHIP**

This scholarship, awarded annually in memory of the late Mr. Selby Parsons, an early graduate of Memorial University of Newfoundland, is under the sponsorship of the family and friends of the late Mr. Parsons. It is open to outport students in their first year. Academic standing as well as financial need will be taken into consideration in making the award. The value of the award will be based on the income accruing from the fund during the period of tenure of the scholarship.

#### **THE JOHN LEWIS PATON ENTRANCE SCHOLARSHIP**

This scholarship is the result of an endowment left to the University from the estate of the late Dr. John Lewis Paton. Valued at a minimum of \$2,500.00 annually, the scholarship will be awarded on the basis of scholarship standing to students entering Memorial University of Newfoundland.

#### **THE ROSE PATTEN SINGLE MOTHER SCHOLARSHIP**

This scholarship has been established by Ms. Patten to encourage and assist women to develop their full academic potential. Valued at the interest on the endowment, it is open to single mothers who are enrolled in full-time undergraduate studies at Memorial University of Newfoundland. It will be awarded taking into consideration financial need as well as scholarship standing. A special application is

required and may be obtained from the Scholarships and Awards Office, Room 4018, University Centre or by calling (709) 737-3956.

#### **THE PERSONA COMMUNICATIONS ENTRANCE SCHOLARSHIP**

Each year, Persona Communications awards two entrance scholarships valued at \$4,000.00 each to students planning to attend Memorial University of Newfoundland in the Fall. In order to qualify for these awards, candidates must be dependants or spouses of subscribers of Persona Communications, reside in one of the communities serviced by Persona Communications, be enrolled as a full-time students, possess scholarship standing as defined by the University, and hold no other concurrent scholarship. In deciding on candidates of equal academic attainment, need will be the determining factor. A special application is required and is available in writing to Persona Communications, 17 Duffy Place, P.O. Box 12155, Station A, St. John's, NL, A1B 4L1.

#### **THE ELAINE PITCHER MEMORIAL SCHOLARSHIP**

This scholarship is the result of an endowment to the University from a bequest left by Elaine Pitcher, a donation from Xerox Canada and donations from family, friends and colleagues of Elaine. Valued at a portion of the annual accrued interest on the endowment, it will be awarded on the basis of scholarship standing to an undergraduate student who is a child of a current or retired staff member of Memorial University of Newfoundland. A special application is required and may be obtained from the Scholarships and Awards Office, Room 4018, University Centre or by calling (709) 737-3956.

#### **THE QUEBEC-LABRADOR FOUNDATION SCHOLARSHIPS**

The Quebec-Labrador Foundation offers three scholarships at \$500.00 each to students enrolled in studies at Memorial University of Newfoundland. The first award, which is funded from the Larry Shields Fund of the Foundation, is awarded annually on the basis of academic performance and financial need to undergraduate students who are (a) native born to Newfoundland and Labrador; and (b) planning to study, or currently studying, Native American and/or Inuit cultures.

In the event that a candidate who meets this specific criteria cannot be found in a particular year, the award may be given to a student in any year from one of the study fields and geographic locations indicated below for the second and third awards.

The second and third awards will be awarded annually on the basis of academic performance and financial need to students in any year providing that they come from one of the following areas: the Northern Peninsula, Fogo, Labrador South, or the Lower North Shore of Quebec (from Natashquan to Blanc Sablon). In awarding these two scholarships, special consideration will be given to those applicants studying in the fields useful to the development of the regions served by the Foundation, e.g. Education, Business, Nursing and Health, Forestry, Fisheries, Engineering and Natural Resources.

#### **ROBERT GILLESPIE REID MEMORIAL SCHOLARSHIPS**

These scholarships are the result of the annual interest from a bequest left to Memorial University of Newfoundland by Mr. Reid. Scholarships valued at two semesters tuition for a full course load, will be awarded annually to students of scholarship standing. These scholarships are open to both Entrance and Undergraduate students.

#### **ROTARY CLUB OF ST. JOHN'S ENTRANCE SCHOLARSHIPS**

These scholarships, valued at a minimum of \$1000.00 each, were established by the Rotary Club of St. John's, Newfoundland, to assist qualified students entering first year of studies at the University. Scholarship standing, as well as financial need, are to be considered in making the awards. The number of awards to be made is contingent on the annual interest on the capital investment.

#### **THE ROYAL CANADIAN LEGION BRANCH NO. 1 MEMORIAL BURSARIES**

Two awards, the first known as the W.R. Dawe Memorial Bursary and the second known as the Walter E. Williams Memorial Bursary, are sponsored by the St. John's Branch No. 1 of the Royal Canadian Legion. These are valued at \$750.00 each and are tenable only at Memorial University of Newfoundland. The awards recognize the contributions of Mr. Dawe and Mr. Williams to the province of Newfoundland and to the Royal Canadian Legion, St. John's Branch No. 1. They are open to Branch No. 1 members' children and grandchildren upon entrance to first year studies at the University. A special application, available from the Branch office or the University's Awards Office, must be completed and returned by August 31 of each year. The awards will be made on the basis of academic standing and need.

#### **ROYAL CANADIAN LEGION (ST. JOHN'S BRANCH NO. 1) MEMORIAL WALL SCHOLARSHIPS**

These scholarships, three at \$1,000.00 each, have been donated by St. John's Branch No. 1 of the Royal Canadian Legion. They were made possible through funds raised in the construction of a Memorial Wall located at the Branch's club rooms. The scholarships are tenable only at Memorial University of Newfoundland to undergraduate students in any faculty, school or year and will be awarded on the basis of scholarship standing and financial need.

#### **THE SAVAL SCHOLARSHIP FUND IN MEMORY OF THE HONORABLE WALTER STANLEY MONROE**

Funded by the interest accruing on a donation from the Estate of Maurice H. Saval, at least two scholarships, valued at \$1,000.00 each, will be awarded annually to students entering Memorial University of Newfoundland in full-time undergraduate studies. These scholarships are in memory of the Honorable Walter Stanley Monroe. The scholarships will be awarded on the basis of academic excellence.

#### **THE DR. MAURICE SAVAL SCHOLARSHIP/ BURSARY FUND**

This fund has been established through the generosity of Dr. Maurice Saval, one of the co-founders in St. John's of the Newfoundland American Insurance Company. From the interest accruing on the fund, a number of scholarships/bursaries will be awarded annually to financially needy and academically deserving undergraduate students. The awards will be open to full-time students in first and second year.

#### **THE SEPTEMBER 11, 2001 INTERNATIONAL SCHOLARSHIP**

As a result of the tragic events in New York, USA on September 11, 2001, nearly 13,000 air travelers were diverted to airports in Newfoundland to ensure their safety. In St. John's, 475 of them were housed on Memorial University of Newfoundland's St. John's campus for several days. Some of the passengers have shown their gratitude to Memorial University of Newfoundland by making donations to establish a fund which will assist students from other countries to attend Memorial University of Newfoundland. This fund will be a perpetual memorial to those who died in the tragic events of that day, while also providing both international students and our community with the opportunity for enrichment through exposure to new cultures and ways of life. To be considered for these scholarships, a student must be eligible to pay the full international undergraduate fee, must register for at least four courses in each of two semesters in their first academic year at Memorial University of Newfoundland, should normally have fewer than 31 credit hours of transfer credits and meet scholarship standing (comparable to that prescribed for Newfoundland and Labrador and Canadian applicants). These scholarships will be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid on the basis of a recommendation from the Director, Office of Student Recruitment.

#### **THE MARIE SULLIVAN (1917-2003) SCHOLARSHIP**

This scholarship, valued at a minimum of \$2,500.00, has been established by Mrs. Sullivan's eleven children. All attended Memorial University of Newfoundland after completing high school in Baie Verte. The scholarship is in recognition of and appreciation for their mother's unwavering commitment to her family and her encouragement to pursue a higher education. It will be awarded to an entrance student on the basis of scholarship standing and financial need.

**THE SWIMMING NEWFOUNDLAND AND LABRADOR ENTRANCE SCHOLARSHIP**

This scholarship, valued at \$1,000.00 annually, is available to a first year student who will attend Memorial University of Newfoundland and be a member of the Memorial University of Newfoundland Seahawks Varsity Swim Team. The scholarship recipient will have been a competitive swimmer in the Province of Newfoundland and Labrador for a minimum of three years and be a swimmer in good standing with Swimming Newfoundland and Labrador. This scholarship will be awarded on the basis of scholarship standing, however, in deciding on candidates of equal academic standing, financial need may be used as a determining factor.

Applications may be obtained in writing to the Swimming Newfoundland and Labrador office, RPO MacDonald Drive, Box 21248, St. John's, NL, A1A 5B2, or telephone to (709) 576-7946, or by fax to (709) 576-7493.

**THE TD BANK FINANCIAL GROUP BURSARY**

The TD Bank Financial Group has established this bursary as part of their commitment to helping students succeed in their post-secondary studies. The bursary is available to part-time or full-time students at Memorial University of Newfoundland who demonstrate financial need. Recipients may be residents of any province or territory in Canada. Valued at the interest on the endowment, the bursary will be awarded to entrance students in any field of study.

**ARTHUR W. TOMS SCHOLARSHIP**

This Scholarship was established by the family of the late Arthur W. Toms who was a farmer, fisherman, Co-op Field Officer, Rural Development Officer, Mayor, and Justice of the Peace, and who played a significant and leading role in the development of La Scie and other communities along the northeast coast of Newfoundland. Valued at a portion of the income on the investment, this scholarship will be awarded based on scholarship standing to a student entering Memorial University of Newfoundland as a full-time student. The scholarship will be open to students from Cape John Collegiate, La Scie, NL. If no suitable candidate is available from Cape John Collegiate preference will be given to students from the Baie Verte Peninsula. If no suitable candidate is available from the Baie Verte Peninsula preference will be given to students from Newfoundland and Labrador. The Scholarship will be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid.

**THE JAMES TUCKER MEMORIAL SCHOLARSHIP**

This scholarship is the result of an endowment which began in 1997 as a part of the *Opportunity Fund Campaign*. The fund will provide a scholarship valued at a minimum of \$500 to students who are children, grandchildren, nieces, nephews or spouses of current, retired or deceased employees or former employees with a minimum of five years service in the Department of Technical Services, Memorial University of Newfoundland. Preference in awarding the scholarship will be given to entrance students but undergraduates may also qualify. The scholarship will be awarded on the basis of scholarship standing but in the case of ties between candidates, need may be used as a determining factor. A special application will be required and may be obtained from the Scholarships and Awards Office, Room 4018, University Centre, telephone (709) 737-3956.

**THE WABUSH MINES UNDERGRADUATE SCHOLARSHIPS**

Five scholarships, valued at \$5,000.00 each annually, will be awarded to permanent residents of the town of Wabush (somebody who has lived in Wabush for a minimum of twelve months prior to attending Memorial University of Newfoundland) who are in first or second year of any undergraduate program at Memorial University of Newfoundland. If five scholarships cannot be awarded in a given year, the number available will increase accordingly in the following year. These scholarships will be awarded by on the basis of scholarship standing.

**THE GEORGE WESTON ENTRANCE BURSARY**

This bursary, valued at a minimum of \$1,000.00, will be awarded annually to a Memorial University of Newfoundland entrance student on the basis of scholarship standing and need. It will be renewable for up to four years (initial + 3) providing first class and scholarship standing is maintained and the recipient continues his/her studies in a Bachelor of Arts or a Bachelor of Science. This bursary will be awarded to a student who was born in one of the Atlantic Provinces.

**THE WOMEN'S ASSOCIATION OF MEMORIAL UNIVERSITY OF NEWFOUNDLAND FACULTY / STAFF SCHOLARSHIP**

The Women's Association of Memorial University of Newfoundland (WAMUN) has established a \$1,000.00 annual scholarship available to students in any faculty or year at Memorial University of Newfoundland, providing they are either:

- a. children of full-time faculty or staff; or
- b. children of deceased or retired faculty or staff, who at the time of death or retirement, were employed full-time.

This scholarship is based on scholarship standing. A special application is required and may be obtained from the Scholarships and Awards Office, Room 4018, University Centre or by calling (709) 737-3956.

**THE WOMEN'S ASSOCIATION OF MEMORIAL UNIVERSITY OF NEWFOUNDLAND SINGLE PARENT UNDERGRADUATE SCHOLARSHIP**

This scholarship, valued at \$900.00, is awarded annually from funds donated by the Women's Association of Memorial University of Newfoundland. It is restricted to single parents enrolled in any faculty, school or year of study at Memorial University of Newfoundland. The Scholarship will be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid on the basis of financial need and scholarship standing. A special application is required and may be obtained from the Scholarships and Awards Office, Room 4018, University Centre or by calling (709) 737-3956.

**THE MARJORIE WYGHT-BARRE MEMORIAL SCHOLARSHIP**

This scholarship, named in memory of Mrs. Marjorie Wyght-Barre (1907-1965) of Montreal, is the result of an endowment created by her husband, Major P.H. Barre. This scholarship, valued at the annual accrued interest on the initial endowment, is to be awarded annually to a Memorial University of Newfoundland entrance student from Newfoundland and Labrador. It will be awarded on the basis of scholarship standing and financial need.

### **3 Scholarships, Bursaries, and Awards Administered By the Senate Committee On Undergraduate Scholarships and Financial Aid for Which Undergraduate Students Already in Attendance at the University May Qualify**

**3.1 General**

The following are not specific to an academic discipline.

**THE ARNOLD'S COVE, COME BY CHANCE, NORTH HARBOUR FISHERS AND NEWFOUNDLAND TRANSSHIPMENT SCHOLARSHIP**

This scholarship was established by Newfoundland Transshipment Limited (NTL) as part of an agreement between them and the

Fishers Liaison Committee (FLC) of the Arnold's Cove, Come By Chance and the North Harbour area. This scholarship, valued at the annual interest on the initial endowment to a maximum of \$500 per student, will be awarded on the basis of scholarship standing to a Fisher or his/her descendant(s) who is registered as a full-time student at Memorial University of Newfoundland in any year or field of study. In the event that no applicants are received from Fishers or Fishers' descendants in a given year, the scholarship may be awarded to another student from above noted geographic areas. Eligibility of applicants under the above criteria will be verified by the Fisheries Liaison Committee (FLC). Memorial University of Newfoundland is encouraged to ensure that the scholarship is alternated between communities and their eligible students. It will be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid on the basis of an application which may be obtained from the Scholarships and Awards Office, Room 4018, University Centre or by calling (709) 737-3956. Completed applications must be returned to the FLC for appropriate verification.

#### **THE ASHBRIDGE SCHOLARSHIPS/BURSARIES**

These awards, at least three at \$500.00 each, are tenable to students beyond the first-year level of undergraduate programs. They are awarded on the basis of need and scholarship standing.

#### **THE BAIRD-STEPHENSON SCHOLARSHIP**

This Scholarship, valued at \$1,000.00 is to be awarded annually to a Memorial University of Newfoundland student in any year or field of study. It is named for Mrs. Edna Baird-Stephenson and her late husband, both of whom were former members of Memorial University of Newfoundland's faculty. The Scholarship will be awarded on the basis of academic excellence.

#### **THE DONALD M. BALSOM AWARD**

The Newfoundland Brain Injury Association (NBIA) has established this award to honor Donald M. Balsom, former Associate Director of Memorial University of Newfoundland's School of Continuing Education and brain injury survivor. Valued at \$500.00, it will be awarded annually to a brain injured undergraduate student who is registered either part-time or full-time, in any year or field of study at Memorial University of Newfoundland, who has some volunteer experience with the NBIA and who is in clear academic standing at the University. In the event that no applications are received from brain injured students the award may be given to a student who has made a significant contribution as a volunteer to the Brain Injury Association. In special circumstances, the award may be held for more than one year. It will be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid in consultation with NBIA as needed.

#### **BARNES HOUSE BURSARIES**

Two bursaries of \$600.00 each have been donated by Dr. Charles Loader former Proctor of Barnes House and are tenable only by residents of Barnes House, Paton College, who have resided in the House for at least one semester prior to application. The awards will be made by the Senate Committee on Undergraduate Scholarships and Financial Aid acting on the advice of a committee established by the Proctor of Barnes House. In making the awards, financial need and academic performance in the previous year will be taken into consideration. The bursaries will not be given to students who hold other major awards and will be paid in two equal instalments over two semester, payment in the second semester being dependent upon the recipients maintaining at least a "B" average. If there are no suitable candidates, the bursaries will not be awarded.

Applications are available from the Residence Assistants, the Proctor or the Paton College Office. The deadline date for application is March 15.

#### **THE BIRKS FAMILY FOUNDATION BURSARIES**

The Birks Family Foundation has established a plan of annual contributions to the student aid funds of recognized Canadian universities for the creation of the Birks Family Foundation Bursaries.

The Bursaries are awarded by the Foundation on the recommendation of the Senate Committee on Undergraduate Scholarships and Financial Aid and are not restricted to faculty or year and may be renewed. The number and amount of such awards may vary annually, depending upon the funds available for the purpose from the Foundation.

#### **THE GLENN ROY BLUNDON MEMORIAL SCHOLARSHIP**

This scholarship, valued at \$500.00, has been established by the family, friends and fellow students of the late Glenn Roy Blundon, a former student of Memorial University of Newfoundland who, despite his severe physical disability, succeeded in his studies and made a significant contribution to student life. In the awarding of this scholarship, preference will be given to academically qualified students with disabilities but those enrolled in the Special Education Program may be considered when no candidates are available from the first group. A special application is required and may be obtained from the Scholarships and Awards Office, Room 4018, University Centre or by calling (709) 737-3956.

#### **THE GARY BOURNE MEMORIAL SCHOLARSHIP**

This scholarship is the result of an endowment to the University funded largely by donations resulting from fundraising efforts of Gary's colleagues at the Office of Financial and Administrative Services. Valued at a portion of the annual accrued interest on the endowment it will be awarded on the basis of scholarship standing to an undergraduate student who is a dependent of a current, retired or deceased staff member of Memorial University of Newfoundland. An application is required and may be obtained from the Scholarships and Awards Office. A special application is required and may be obtained from the Scholarships and Awards Office, Room 4018, University Centre or by calling (709) 737-3956.

#### **THE DOCTOR WILLIAM BOYLE SCHOLARSHIPS**

Under the will of the late Dr. Robert William Boyle, the University, in 1956, received bequests establishing two scholarships, one in memory of the testator's mother, Sophie (Maddock) Boyle, to be awarded to a female student attending the University; and the other in memory of his father, Albert Desbrisay Boyle, to be awarded to a male student attending the University.

The scholarships are to be awarded to the students who, having attended the University for a period of at least two years, are, in the opinion of the governing body of the University, best qualified in virtue of all-round attainment. Each scholarship will be tenable for two years and the emolument will be the income accruing from the bequest during the period of tenure of the scholarship.

#### **THE BRITISH WAR BRIDES OF NEWFOUNDLAND AND LABRADOR AWARD**

This award is the result of a donation to the University in 1997 by the British War Brides of Newfoundland and Labrador. Valued at \$1,000.00 annually, it will be awarded to a student in his/her second year at Memorial University of Newfoundland who has scholarship standing. First preference for the award will be given to a relative of a British War Bride. In the event that such a candidate is not available in a given year, the award will be granted to another second year student who has scholarship standing. A special application is required and may be obtained from the Scholarships and Awards Office at Memorial University of Newfoundland.

#### **THE BURKE HOUSE SCHOLARSHIP**

One bursary of \$700.00 is tenable by a resident of Burke House, Paton College, who has resided in the House for at least two semesters prior to application. In making the award, financial need, academic performance, and leadership contribution will be taken into consideration. The bursary will be awarded to a student who does not hold a concurrent major award and will be paid in two equal installments over a two-semester period, payment in the second semester being dependent on the recipient maintaining at least a "B" average. If in any year there is no suitable candidate, the bursary will not be awarded for that year. The award will be made by the Senate Committee on Undergraduate Scholarships and Financial Aid acting on the advice of a committee established by the Proctor of

Burke House. Application forms are available from the Academic Don, the Proctor, or the Paton College Student Housing Office.

#### **THE CALGARY ALUMNI SCHOLARSHIP**

This scholarship is being established through the fund raising efforts of the Calgary Alumni Branch of the Memorial University of Newfoundland Alumni Association. The scholarship, valued at a portion of the income on the investment, will be available to an undergraduate student, beyond first year, in any field of study who is a resident of Newfoundland and Labrador (a person who has maintained permanent residence in the province for a minimum of twelve months immediately prior to entering the University) and who demonstrates academic excellence. Based on scholarship standing it will be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid.

#### **THE CANADIAN FEDERATION OF UNIVERSITY WOMEN BURSARIES**

Two bursaries, valued at \$1000.00 each, are offered annually by the Canadian Federation of University Women to female students in full-time or part-time studies. The awards are made on the basis of academic standing and financial need and are not restricted to any particular faculty or year of study. The first of these bursaries is named in memory of Dr. Edith M. Manuel, well-known Newfoundland educator and charter member of the C.F.U.W., who died in 1984. The second is named for long-time C.F.U.W. member, Olga Anderson.

#### **THE CANADIAN INSTITUTE OF MINING, METALLURGY AND PETROLEUM (NEWFOUNDLAND BRANCH) GOLDEN JUBILEE SCHOLARSHIP**

This scholarship valued at a portion of the income on the investment, will be awarded to a student entering the final year of undergraduate studies at Memorial University of Newfoundland. Based on scholarship standing, the scholarship will be available to a student majoring in a field of study that is covered by the fields of interest of the Canadian Institute of Mining, Metallurgy and Petroleum specifically; Earth Sciences, Geophysics, Geography, Economics, Environmental Science, Engineering, Business and Commerce. Financial need may be taken into consideration. The scholarship will be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid.

#### **THE COCA-COLA SCHOLARSHIP FOR INTERNATIONAL STUDIES**

This scholarship, valued at the annual interest on its endowment, has been established from contributions to the University's *Opportunity Fund* Campaign by The Coca-Cola Foundation. It will be awarded to a student who has completed at least two years of a degree program at Memorial University of Newfoundland and who has been accepted to attend a recognized university outside Canada for one or two semesters of study for transfer credit to Memorial University of Newfoundland towards completion of his/her undergraduate degree.

#### **THE COMPASS GROUP CANADA SCHOLARSHIP**

From a sum of money donated by Compass Group Canada, a scholarship fund has been established for students who reside in Paton College, who have completed their second year of studies while in residence and who will return to residence for their third year. The awards, valued at a minimum of \$1,000.00, will be made annually on the basis of academic excellence. The purpose of the scholarship is to encourage senior students of high academic calibre to live in residence.

#### **THE RAYMOND J. CONDON MEMORIAL ALUMNI SCHOLARSHIP**

This scholarship, valued at \$1,000.00, will be awarded to a student who has completed the first year College Transfer Program at the Labrador West Campus of the College of the North Atlantic and is transferring to Memorial University of Newfoundland the following year. The recipient must be of scholarship standing as defined by the University. The Senate Committee on Undergraduate Scholarships and Financial Aid will award the scholarship upon recommendation of the Principal, Labrador West Campus.

#### **THE CROWLEY BURSARIES**

These bursaries, one or more valued at a minimum of \$1,000.00 each annually, are the result of the interest on an endowment to the University by Mr. Ronald Crowley. In awarding these bursaries preference will be given to undergraduate sons or daughters of fisherpersons whenever possible. However, when such candidates cannot be identified the bursaries will be awarded to other eligible undergraduate students at Memorial University of Newfoundland. In both cases candidates may be in any year or field of study. They will be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid on the basis of scholarship standing and financial need as defined by the University.

#### **THE REVEREND DOCTOR LEVI CURTIS BURSARY**

This bursary has a value of at least \$200.00 and is awarded each year to a student who is a candidate for the ministry of the United Church, a child of a minister of the United Church, or the child of a needy United Churchman. A special application is required and may be obtained from the Scholarships and Awards Office, Room 4018, University Centre or by calling (709) 737-3956.

#### **THE DONALD W.K. DAWE MEMORIAL SCHOLARSHIP**

This annual scholarship, valued at \$500.00, has been established by the family, friends and associates of the late Donald W.K. Dawe, Q.C., who attended the Memorial University College in 1933-34. In making the award, preference may be given in the first instance to a needy and academically qualified student beyond the first year from outport Newfoundland and Labrador.

#### **THE VIVIAN DOUGLAS MEMORIAL SCHOLARSHIP**

This scholarship has been established from a donation to the University by Mrs. Edna Baird-Stephenson in honor of her housekeeper Mrs. Vivian Douglas from Grand Bank. It is valued at the annual accrued interest on the initial donation and will be awarded to a student beyond first year in any field of study. It will be awarded annually on the basis of scholarship standing and financial need.

#### **THE DOYLE HOUSE AWARDS**

These awards are the result of fundraising by the Doyle House Academic Committee. Three, valued at \$100.00 each, will be awarded annually to residents of Doyle House. They will be awarded in the Winter semester of each year as follows:

- Highest senior resident average; to a resident of Doyle House who has resided there two consecutive semesters prior to receiving the award and who has a minimum of 70% average.
- Highest freshman resident average; to a student who had resided in Doyle House for the current and previous semester and who had a minimum of 70% average in the Fall Semester.
- Most improved average; to a student who has shown the greatest academic improvement during the most recent two semesters, who has been a resident of Doyle house for two consecutive semesters prior to receiving the award and who has a minimum of 70% average in the most recent semester he/she must have achieved at least a 50% average.

These awards will be made by the Senate Committee on Undergraduate Scholarships and Financial Aid acting upon a recommendation from a committee representing Student Housing, Food and Conference Services and Doyle House. Additional information can be obtained from the Residence Assistants, Academic Don or Proctor of Doyle House.

#### **THE DR. J. DOUGLAS EATON SCHOLARSHIPS**

Upon the retirement of Dr. J. Douglas Eaton from the position of Vice-President (Student Affairs & Services) in 1983, the student body of Memorial University of Newfoundland donated a sum of money to fund two undergraduate scholarships in his honour, valued at \$500.00 each. These awards, tenable to students beyond first year will be made on the basis of academic standing and demonstrated active

participation in student life. In cases of competition between students of equal standing, need shall be the determining factor in awarding the scholarships. The scholarships will be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid, acting on the recommendation of a special selection committee, consisting of members of MUNSU and the Office of Student Affairs & Services.

#### **THE FRASER EDISON SCHOLARSHIP**

This scholarship is the result of a donation to the *Opportunity Fund* in 1999 by Mr. Fraser Edison. It will be valued at the annual interest on the endowment and will be awarded to an undergraduate student who has a recognized physical disability. An application is required and the scholarship will be awarded on the basis of scholarship standing to a student in any year or field of study. A special application is required and may be obtained from the Scholarships and Awards Office, Room 4018, University Centre or by calling (709) 737-3956.

#### **THE FACILITIES MANAGEMENT UNDERGRADUATE SCHOLARSHIP**

This scholarship fund is the result of an endowment which began in 1996 as a part of the *Opportunity Fund Campaign*. The fund will provide one or more scholarships valued at a minimum of \$500 each to students who are children, grandchildren, nieces, nephews, brothers, sisters or spouses of current or retired employees of the Department of Facilities Management, Memorial University of Newfoundland. Preference in awarding the scholarship(s) will be given to entrance students but undergraduates may also qualify. The scholarship(s) will be awarded on the basis of scholarship standing but in the case of ties between candidates, need may be used as a determining factor. A special application will be required and may be obtained from the Scholarships and Awards Office, Room 4018, University Centre, telephone (709) 737-3956.

#### **THE RALPH L. FINLEY SCHOLARSHIPS**

Under the will of the late Mr. Ralph L. Finley, the University in 1987 received a bequest establishing two scholarships. The awards are to be tenable to needy undergraduate students, residing in the University residences during the academic year, who attain a minimum average of 70%. The value of the awards will depend on the income accruing from the bequest during the period of tenure of the scholarships. The amounts to be awarded are to be applied to the recipients' tuition and/or residence fees.

#### **THE CHARLIE (MOO SIC) FONG MEMORIAL SCHOLARSHIP**

This scholarship, valued at the annual interest (approximately \$600.00 - \$700.00 annually), is the result of an endowment by the Fong family in memory of their great-grandfather, Mr. Charlie (Moo Sic) Fong. It was established to commemorate the 100th anniversary of the first Chinese settler in Newfoundland and to promote an awareness of the Chinese Cultural and Historical background in the province. It will be awarded on the basis of scholarship standing and financial need to an undergraduate student at Memorial University of Newfoundland with a Chinese heritage. The scholarship will be given early in Winter semester and presented to the student at a local function held to celebrate the Chinese New Year. A special application is required and may be obtained from the Scholarships and Awards Office, Room 4018, University Centre or by calling (709) 737-3956.

#### **THE NICOLE FORTIER MEMORIAL SCHOLARSHIP**

The family and friends of Nicole Fortier have established this scholarship in her memory to encourage and assist women to develop their full academic potential. Valued at \$1,000.00, it is open to single mothers who are enrolled in full-time undergraduate studies at Memorial University of Newfoundland. First preference will be given to single mothers who are doing a major in Geography. In the event of no such eligible candidates it will be awarded to a single mother doing any undergraduate program. It will be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid taking into account financial need as well as scholarship standing.

#### **THE DR. G.A. FRECKER MEMORIAL ALUMNI BURSARIES**

The Memorial University of Newfoundland Alumni Association has established, from its Annual Fund, five bursaries named in honour of the late Dr. G.A. Frecker, Chancellor, Memorial University of Newfoundland, 1971-79, and valued at \$500.00 each. Four of the bursaries are tenable at the St. John's campus and one at the Sir Wilfred Grenfell College at Corner Brook. The bursaries will be awarded annually to full-time students in any faculty or year on the basis of academic standing and financial need.

#### **FRIENDS OF INDIA ASSOCIATION SCHOLARSHIP**

This award, valued at \$500.00, is awarded annually from funds donated by the Friends of India Association. The scholarship is open to any student registered at Memorial University of Newfoundland who is beyond first year studies. This scholarship will be awarded on the basis of scholarship standing.

#### **THE GENERAL MOTORS UNDERGRADUATE SCHOLARSHIP**

This scholarship was established by General Motors of Canada Limited with contributions to the University's *Opportunity Fund Campaign*. Interest from the fund will provide one or more scholarships to support individuals who qualify as Native People, members of a Visible Minority and/or Physically Disabled. It will be awarded to students in any year or faculty or school at Memorial University of Newfoundland. It will be awarded on the basis of scholarship standing and an application may be obtained from the Scholarships and Awards Office, Room 4018, University Centre or by calling (709) 737-3956.

#### **THE JOAN HAIRE MEMORIAL SCHOLARSHIP**

This scholarship is the result of an endowment which began in 1997 as a part of the *Opportunity Fund Campaign*. The fund will provide a scholarship valued at a minimum of \$500 to students who are children, grandchildren, nieces, nephews or spouses of current, retired or deceased employees or former employees with a minimum of five years service in the Department of Technical Services, Memorial University of Newfoundland. Preference in awarding the scholarship will be given to entrance students but undergraduates may also qualify. The scholarship will be awarded on the basis of scholarship standing but in the case of ties between candidates, need may be used as a determining factor. A special application will be required and may be obtained from the Scholarships and Awards Office, Room 4018, University Centre, telephone (709)737-3956.

#### **THE FREDERICK J. HANCOCK SCHOLARSHIP**

This scholarship is the interest on a sum of money donated to the University by Frederick J. Hancock, former Sergeant of the Newfoundland Constabulary who served as a member of the Force for twenty-five years until his retirement in 1963. Preference in the awarding of this scholarship will be given to sons and daughters of active, retired or deceased members of the Royal Newfoundland Constabulary. Candidates must be enrolled in full-time studies at the University and possess scholarship standing. When no candidates can be found from the above category, the scholarship may be awarded to any full-time student on the basis of academic merit. A special application is required and may be obtained from the Scholarships and Awards Office, Room 4018, University Centre or by calling (709) 737-3956.

#### **THE A. HARVEY & COMPANY LIMITED SCHOLARSHIP PROGRAM**

On the occasion of its 125th anniversary, A. Harvey & Company Limited established this scholarship tenable at Memorial University of Newfoundland and valued at \$1,500.00. In order to qualify candidates must:

- a. Be a dependent or spouse of employees of the company;
- b. Be enrolled as a full-time student;
- c. Posses scholarship standing as defined by the University; and
- d. Hold no other concurrent scholarship.

Preference will be given to entrance students; however, if there is no eligible candidate enrolled in first year studies, then the scholarship



may be awarded to a senior undergraduate student attending Memorial University of Newfoundland who fulfills the above criteria. In deciding between candidates of equal academic attainment need will be the determining factor. The deadline date for applying is the last Friday in July. Further information and application forms are available in writing to A. Harvey & Company Limited, 87 Water Street, P.O. Box 5128, St. John's, NL, A1C 5V6

#### **THE C. D. HOWE MEMORIAL FOUNDATION SCHOLARSHIP**

These scholarships result from a contribution by the C. D. Howe Memorial Foundation. The Annual income from this endowment will be utilized to fund up to six scholarships valued at the cost of one year's tuition for full-time students, the amount varying depending on the number of courses taken. The scholarships will be awarded to undergraduate students entering second, third, fourth or fifth years of study in any undergraduate program. The scholarships will be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid on the basis of scholarship standing, financial need, and a recommendation from the appropriate Dean or academic Director. Application for these scholarships must be made by March for a scholarship to be awarded in September of the same year.

#### **THE KATHLEEN HUCKABONE BURSARY**

This bursary was established by the family of Kathleen Huckabone in August, 2004 as a special tribute, on the occasion of her 70th birthday. Valued at \$2,000.00 and awarded annually by the Senate Committee on Undergraduate Scholarships and Financial Aid, it is given to a first year student at Memorial University of Newfoundland who is a graduate of a high school in the Eastport/Salvage area, is in need of financial assistance and has completed one semester of full-time studies with satisfactory standing. If no candidates meet the foregoing criteria, the bursary may be awarded to an undergraduate student from the Eastport/Salvage area in any year of study at Memorial University of Newfoundland.

#### **THE IRON ORE COMPANY OF CANADA UNDERGRADUATE SCHOLARSHIP**

These Scholarships are the result of a portion of a generous donation to the *Opportunity Fund* Campaign by the Iron Ore Company of Canada. Ten scholarships, valued at \$5,000.00 each annually, will be awarded to permanent residents of Labrador City (somebody who has lived in Labrador for a minimum of twelve months prior to attending Memorial University of Newfoundland) who are in first or second year studies of any undergraduate program at Memorial University of Newfoundland. If ten scholarships cannot be awarded in a given year, the number available will increase accordingly in the following year. These scholarships will be awarded on the basis of scholarship standing.

#### **THE ETHEL H. JUDSON MEMORIAL SCHOLARSHIP**

This scholarship, valued at the annual interest on the endowment, has been established by Mrs. Edna Baird-Stephenson in memory of her late sister Ethel. It will be awarded annually to a Memorial University of Newfoundland student in any year or field of study. The scholarship will be awarded on the basis of academic excellence.

#### **KEY TAG SCHOLARSHIPS**

Up to three scholarships, valued at \$500.00 per annum, are donated by the Newfoundland Branch of the War Amputees of Canada, and are to be known as the Key Tag Scholarships. These scholarships are awarded annually to amputee students in any year or field of study at Memorial University of Newfoundland. In the event that no applications are received from amputee students, the Committee may consider other physically disabled students. In making the awards, financial need, initiative and scholastic achievement will be considered. In special circumstances, the scholarships may be held for more than one year. A special application is required and may be obtained from the Scholarships and Awards Office, Room 4018, University Centre or by calling (709) 737-3956.

#### **THE IRIS KIRBY MEMORIAL SCHOLARSHIP**

This award, valued at \$650.00 annually, has been established by the friends and colleagues of the late Iris Kirby. Iris was an active feminist and advocate of encouraging women to develop their fullest potential. The scholarship is open to women enrolling in full-time undergraduate studies at Memorial University of Newfoundland who are entering or returning after at least five years out of full-time study. Applicants should have been resident in Newfoundland for at least one year before applying. The scholarship will be awarded in the Winter semester on the basis of the Fall semester's results. In deciding on candidates of equal academic attainment, a commitment to the goal of an equal status for women in our society will be considered. A special application is required and may be obtained from the Scholarships and Awards Office, Room 4018, University Centre or by calling (709) 737-3956.

#### **KOREA VETERANS' ASSOCIATION SCHOLARSHIP**

Twenty-six thousand, seven hundred and ninety-one (26,791) Canadians served in the Korean Theatre between the beginning of hostilities in 1950 and the signing of the cease-fire in 1953. Another 7,000 served between the cease-fire and the end of 1955. This scholarship was established to honour the men and women of the various Canadian Military Units that served in the United Nations Forces during that period of time. One scholarship of \$500 is awarded annually to a student who meets the following criteria: A full-time first year student at Memorial University of Newfoundland who is the child or grandchild of a Canadian Korea War Veteran and who has scholarship standing. In a year when there is no eligible child or grandchild in first year, the scholarship may be awarded to a child or grandchild beyond first year studies. If there is still no eligible student, the scholarship may be awarded to any first year student at Memorial who has scholarship standing. This scholarship will be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid on the basis of an application which is available from the Scholarships and Awards Office, Rm. 4018, University Centre.

#### **THE LAW FOUNDATION OF NEWFOUNDLAND LEGAL RESEARCH AWARDS FOR STUDENTS OF MEMORIAL UNIVERSITY**

The Law Foundation of Newfoundland annually offers up to five Awards to undergraduate students valued at \$500.00 (five hundred dollars) each for best research term paper on one or more legal issues, or topics treated in a legal context, in a senior level course in any discipline at the undergraduate level. The papers submitted by and with endorsement of course professor or lecturer will be judged initially by the Dean, or Director, or Department Head who will make a recommendation to a selection committee for the Awards. The selection committee will comprise appointees of Memorial University of Newfoundland and the Law Foundation. The Awards will be made by the Senate Committee on Undergraduate Scholarships and Financial Aid acting upon the recommendation of the selection committee. An additional \$500.00 (five hundred dollars) will be provided annually by the Law Foundation to Queen Elizabeth II Library for the purchase of research materials and resources. Total Awards \$3,000.00

#### **THE LOCKE'S ELECTRICAL LIMITED 50TH ANNIVERSARY SCHOLARSHIP**

This scholarship is the result of an endowment established by Locke's Electrical Limited, Corner Brook, on the occasion of their 50th anniversary. Valued at the interest on the endowment, it will be awarded on the basis of scholarship standing to an undergraduate student in any year of study who is a child or grandchild of a current or retired staff member of Locke's Electrical Limited or one of its affiliates. If the scholarship is not awarded in one year then two may be awarded the following year. An application is required and may be obtained from, and returned to, Locke's Electrical Limited, Corner Brook.

#### **THE DR. WAYNE E. LUDLOW SCHOLARSHIP**

This scholarship is the result of an endowment made by the undergraduate students of Memorial University of Newfoundland in honor of Dr. Wayne E. Ludlow on his retirement, in 1999, from the position of Dean of Student Affairs and Services. Valued at a portion of the income on the endowment, this scholarship is tenable to students beyond second year, based on scholarship standing and demonstrated active participation in student life. Factors to be considered will include but not be limited to involvement in student government, clubs and societies and student media. Financial need may also be considered. The scholarship will be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid, acting on the recommendation of a selection committee of

members of MUNSU and the Office of Student Affairs and Services.

#### **THE ARTHUR AND SONIA MAY SCHOLARSHIP**

The scholarship, which is expected to be between \$4,000 and \$5,000 (based on the annual interest on its endowment), has been established by Arthur and Sonia May on the occasion of the University's 50th Anniversary as a degree-granting institution, and in gratitude for the outstanding experience they enjoyed as students. It will be awarded to a student who has completed at least two years of a degree program at Memorial University of Newfoundland and who has been accepted to attend a recognized university outside Canada for one or two semesters of study for transfer credit to Memorial University of Newfoundland towards completion of his/her undergraduate degree. Applications may be made to the Scholarships and Awards Office, Room 4018, University Centre on or before March 31.

#### **THE HECTOR AND FANNY MCNEIL MEMORIAL TRUST FUND SCHOLARSHIPS**

From the interest accruing from this fund, at least two scholarships, at \$500.00 each, will be awarded annually to academically deserving students at Memorial University of Newfoundland beyond first year.

#### **THE MEMORIAL GOLF TOURNAMENT SCHOLARSHIP**

This scholarship is a result of funds made available by participants in the Annual Memorial University Scholarship Golf Tournament. Proceeds from the annual tournament will be used to endow a \$1,500.00 scholarship(s). This scholarship(s) will be awarded to an undergraduate student(s) in second or third year who received an entrance scholarship in first year and has maintained an A average as well as scholarship standing. The student(s) must be continuing on in a degree program at the University and would not have otherwise received a general scholarship of equal or higher value.

#### **MEMORIAL UNIVERSITY OF NEWFOUNDLAND ENDOWMENT SCHOLARSHIPS**

These scholarships, established by Memorial University of Newfoundland are awarded annually to students in any year or faculty with approximately 50% of those awarded in a given year allocated for Entrance Students. The number and value of the annual scholarships vary depending on the interest earned. They are awarded on the basis of scholarship standing.

#### **THE MEMORIAL UNIVERSITY OF NEWFOUNDLAND FACULTY ASSOCIATION SCHOLARSHIP FUND**

The Memorial University of Newfoundland Faculty Association has established a trust fund to provide scholarships and bursaries to needy students in good academic standing. Assistance from this fund is available to entering students as well as to those further along in their studies and may be re-applied for in subsequent years. The first of the MUNFA Scholarships awarded each year is the Ditte Koster Memorial Scholarship. This award honours the late Ditte Koster who, up to the time of her death, was a professional librarian at the University. As a contribution to the *Opportunity Fund* in 1999, the Faculty Association pledged to pay the University the interest from their trust for the period January 1, 2000 to March 31, 2004. The matching money from this pledge will be contributed to the University's general Scholarship Endowment Fund allowing the University to award additional general scholarships.

#### **THE ELSA S. MORGAN MEMORIAL SCHOLARSHIP**

This scholarship, valued at \$500.00, was donated by the late Dr. John M. Morgan, B.Sc., M.D., in memory of his wife, Elsa S. Morgan. Dr. Morgan was born at Port-de-Grave, Conception Bay, Newfoundland and spent all of his professional life in the United States. The scholarship is awarded to a deserving student of scholarship standing who has completed the first year of studies and is proceeding to the second year. Preference will be given to students from the district of Port-de-Grave.

#### **THE JACOB AND FLORAL MORGAN SCHOLARSHIP FUND**

This fund has been established by relatives and friends of the late Jacob Morgan, a teacher for thirty years in the outports of this province, and of his wife Floral. One or more scholarships, valued at not less than \$2,500.00 each will be awarded annually. Preference will be given to students from the smaller outports, primarily to those who are entering the University for the first time.

#### **THE JOHN THOMAS AND AMY SUSANNAH MORGAN MEMORIAL SCHOLARSHIP**

This scholarship, valued at \$500.00, was donated by the late Dr. John M. Morgan, B.Sc., M.D., in memory of his parents, John Thomas and Amy Susannah Morgan. The scholarship is awarded to a deserving student of scholarship standing, who has completed his or her first year of studies and is proceeding to second year. Preference will be given to students from the district of Port-de-Grave/Harbour Grace.

#### **THE M.O. MORGAN ALUMNI SCHOLARSHIPS**

At least three scholarships valued at a minimum of \$1000.00 each, gifts of the Memorial University of Newfoundland Alumni Association, are awarded annually to students beyond first year on the basis of academic excellence.

#### **THE EDWARD G. MULLINS MEMORIAL SCHOLARSHIP**

This scholarship valued at \$500.00 annually has been established by the Newfoundland and Labrador Branch of the Kidney Foundation of Canada. It honours the memory of the late Edward G. Mullins who had kidney disease and was a dedicated volunteer of the Foundation. Preference will be given to applicants who have kidney disease, who have completed a minimum of 18 credit hours over 2 semesters in the previous scholarship year with a minimum average of 75% in the courses which comprise those credit hours and are enrolled full time at the University. However, if in a given year such an applicant(s) is not available, dependents of someone who has/had kidney disease may qualify. Such applicants must be enrolled full time at Memorial University of Newfoundland and have scholarship standing. In deciding on candidates of equal academic attainment from the latter group, need may be the determining factor. In some cases the scholarship may be held for more than one year. A special application is required and must be submitted to the scholarship office. Applications may be obtained in writing to The Kidney Foundation of Canada, Newfoundland & Labrador Branch, P.O. Box 7342, St. John's, NL, A1E 3Y5 or to the Scholarships and Awards Office, Room 4018, University Centre, Memorial University of Newfoundland, or by telephone to (709) 737-3956 or (709) 753-8999.

#### **THE MUNSU UNDERGRADUATE SCHOLARSHIP**

This scholarship fund is the result of an endowment which began in 1996 as a part of the *Opportunity Fund* Campaign. The fund will provide a scholarship valued at the annual interest on the endowment, to students who are children, grandchildren, or spouses of current (worked a minimum of 15 of the last 24 months) or retired employees of MUNSU, Memorial University of Newfoundland or of previous employees who had a minimum of ten years of service to MUNSU. In the event that there are no eligible candidates from the above group in a given year the scholarship will be open to nieces or nephews of current, retired or previous employees of MUNSU (as per above). It will be open to entrance students as well as undergraduates. The scholarship is not renewable and individuals will not normally hold the scholarship more than once unless there is no other eligible candidate in a given year. The scholarship will be awarded on the basis of scholarship standing but in the case of ties between candidates, need may be used as a determining factor. A special application will be required and may be obtained from the Scholarships and Awards Office, Room 4018, University Centre, telephone (709) 737-3956.

#### **THE MUNSU 25th ANNIVERSARY SCHOLARSHIP**

This scholarship is the result of an endowment established by MUNSU (1994) and is valued at the annual accrued interest. It will be awarded to a student who has completed at least one year at Memorial University of Newfoundland. Based on scholarship standing and active participation in student life, it will be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid upon the recommendation of the President, MUNSU.

**HARVEY AND DORIS MURCELL SCHOLARSHIPS**

This scholarship has been established from funds donated by Harvey and Doris Murcell. Scholarships of at least \$1,000.00 shall be awarded under the following conditions:

- a. A scholarship to two entrance students who are residents of Harbour Grace who attended High School in Conception Bay North.
- b. Four scholarships to students of any year from high schools in the Conception Bay North area.
- c. Other scholarships as the fund will bear.

The scholarships shall be awarded based on scholarship standing.

**THE NEWFOUNDLAND AND LABRADOR NEUROTRAUMA INITIATIVE AWARD**

This award, valued at a portion of the income on the investment, is made possible by a generous endowment from the Newfoundland and Labrador Neurotrauma Initiative Program, a partnership between the Rick Hansen Man in Motion Foundation, the Canadian Paraplegic Association, the Brain Injury Association and the Government of Newfoundland and Labrador. The award will be available on an annually rotating basis between undergraduate and graduate students, with first preference given to a student who has been identified with a brain or spinal cord injury. For undergraduate students applications are available from the Scholarships and Awards Office, Room UC4018, University Centre, (709) 737-3956. Graduate Students are required to apply specifically to the School of Graduate Studies, Room IIC 2021, Inco Innovation Centre, (709) 737-2600. If no candidate is available with a brain or spinal cord injury, preference will be given to a student who is studying in any field related to neurotrauma. If it is not awarded at the level of study (i.e. graduate/undergraduate) on rotation in a given year, it may be awarded to a student studying at the other level for that year. In the case of undergraduates, the award will be made by the Senate Committee on Undergraduate Scholarships and Financial Aid. In the case of graduates it will be awarded by the Dean, School of Graduate Studies on the recommendation of the Awards and Medals Committee. This award is open to part-time or full-time students with clear academic standing.

**THE ELSIE AND STEPHEN O'NEILL BURSARY**

The children of Elsie and Steve O'Neill established this bursary in appreciation of their parents' support and encouragement toward their higher education. The bursary, which will be valued at \$500 annually, will be awarded to a single mother with first preference to a current part-time undergraduate student. She must also have been enrolled part-time for two or more semesters prior to the semester in which the scholarship is awarded, and have maintained a "B" average in those semesters. If no student meeting the above criteria can be identified, the bursary will be awarded to an undergraduate single mother who is currently registered at the university (part-time or full-time), who has maintained a "B" average in the courses completed in the previous scholarship year and has financial need. A special application is required and may be obtained from the Scholarships and Awards Office, Room 4018, University Centre or by calling (709) 737-3956.

**THE FLORENCE O'NEILL SCHOLARSHIPS**

An endowment donated to the University by Florence O'Neill, Ed.D., C.M., LL.D., honorary graduate of Memorial University of Newfoundland, distinguished for her contribution to the fields of adult education and community development, will fund annual scholarships valued up to \$1,000.00 each. These awards will be made available to full-time undergraduate students, preferably to those from rural Newfoundland and Labrador, on the basis of scholarship standing. One shall be given annually to a student attending the Sir Wilfred Grenfell College in Corner Brook.

**THE R.A. PARSONS SCHOLARSHIP FUND**

The purpose of this fund is to provide scholarships to students in good academic standing and in proven financial need. There are no restrictions as to year or field of study.

**THE JOHN LEWIS PATON SCHOLARSHIP**

This scholarship is awarded out of the income from the Fund established in 1926 by John Lewis Paton to enable graduates of the Memorial University College to continue university training. Known until 1946 as the Memorial University College Scholarship, it has been re-named to honour the memory of the first President of the College. This scholarship has a value of at least \$300.00. It is awarded annually to a student who has successfully completed three years of a degree course. In making the award, scholastic achievement and promise, qualities of character, economic need and other relevant factors will be taken into account.

**THE ROSE PATTEN SINGLE MOTHER SCHOLARSHIP**

This scholarship has been established by Ms. Patten to encourage and assist women to develop their full academic potential. Valued at the interest on the endowment, it is open to single mothers who are enrolled in full-time undergraduate studies at Memorial University of Newfoundland. It will be awarded taking into consideration financial need as well as scholarship standing. A special application is required and may be obtained from the Scholarships and Awards Office, Room 4018, University Centre or by calling (709) 737-3956.

**THE ELAINE PITCHER MEMORIAL SCHOLARSHIP**

This scholarship is the result of an endowment to the University from a bequest left by Elaine Pitcher, a donation from Xerox Canada and donations from family, friends and colleagues of Elaine. Valued at a portion of the annual accrued interest on the endowment, it will be awarded on the basis of scholarship standing to an undergraduate student who is a child of a current or retired staff member of Memorial University of Newfoundland. A special application is required and may be obtained from the Scholarships and Awards Office, Room 4018, University Centre or by calling (709) 737-3956.

**THE PRO VICE-CHANCELLOR'S PRIZE**

The Strategic Framework for Memorial University of Newfoundland states that Memorial will enrich undergraduate education by helping students to experience the excitement of intellectual discovery, introducing undergraduates more effectively to the wider academic enterprise. In encouragement of this objective and in recognition of superior writing and scholarship by undergraduate students that deserves a wider audience, the Vice-President (Academic) and Pro Vice-Chancellor has established a series of prizes for the best undergraduate scholarship done each year at the University.

Instructors are invited to nominate examples of their undergraduate students' course work for the Pro Vice-Chancellor's Prize. The professor will certify that the work is original and the student's own work, and submit it to his/her head/director who will transmit it to the committee. Students may also submit their own course work for consideration. Instructors' comments should not appear. In accepting nomination or making application, students agree to publication.

Nominations and applications will be assessed by a selection committee consisting of five academic staff members and chaired by the Associate Vice-President (Academic). The committee will adjudicate entries for their intellectual originality, cogency, facility of expression, and adherence to principles of scientific inquiry and critical thinking.

The value of the prize is \$500 cash or a \$1000 scholarship tenable in a graduate program at Memorial University of Newfoundland. Up to five prizes will be awarded each year. At the discretion of the selection committee, honorable mention may be accorded to entries beyond the available number of prizes.

**THE QUEBEC-LABRADOR FOUNDATION SCHOLARSHIPS**

The Quebec-Labrador Foundation offers three scholarships at \$500.00 each to students enrolled in studies at Memorial University of Newfoundland. The first award, which is funded from the Larry Shields Fund of the Foundation, is awarded annually on the basis of

academic performance and financial need to undergraduate students who are (a) native born to Newfoundland and Labrador; and (b) planning to study, or currently studying, Native American and/or Intuit cultures.

In the event that a candidate who meets this specific criteria cannot be found in a particular year, the award may be given to a student in any year from one of the study fields and geographic locations indicated below for the second and third awards.

The second and third awards will be awarded annually on the basis of academic performance and financial need to students in any year providing that they come from one of the following areas: the Northern Peninsula, Fogo, Labrador South, or the Lower North Shore of Quebec (from Natashquan to Blanc Sablon). In awarding these two scholarships, special consideration will be given to those applicants studying in the fields useful to the development of the regions served by the Foundation, e.g. Education, Business, Nursing and Health, Forestry, Fisheries, Engineering and Natural Resources.

#### **150 RCAF WING MEMORIAL SCHOLARSHIP**

This Scholarship, valued at a portion of the annual accrued interest on the endowment, will be tenable only at Memorial University of Newfoundland to a full time undergraduate student in any year or field of study, based on scholarship standing. Consideration may be given to students demonstrating financial need. The Scholarship will be available to: (i) a Wing member (as defined by the Constitution) or \*relative of a Wing member; (ii) an Air Force Veteran or a \*relative of an Air Force Veteran; (iii) an Air Cadet/ex Air Cadet of the 515 North Atlantic Squadron (defined as any person who has served for two years and is/was in good standing at present or at the time of departure from his/her Air Cadet Unit). \*Note: Relative is defined as son/daughter; grandson/daughter; great-grandson/daughter; brother/sister; nephew/niece. The Scholarship may be awarded to the same applicant more than once. If in any given year, there is no eligible candidate, two scholarships may be awarded in the following year at the discretion of the trustees. The Scholarship will be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid. Applications are available at 150 RCAF Wing or from the Scholarships and Awards Office, Room 4018, University Centre, Memorial University of Newfoundland. Applicants will be required to submit a personal letter of application, stating goals, personal achievements and financial need. Applications are to be submitted in writing to 150 RCAF Wing - Memorial Scholarship Committee, 565 Roosevelt Avenue, Pleasantville, St. John's, NL, A1A 5B2. You may contact us by telephone to (709) 753-8970.

#### **ROBERT GILLESPIE REID MEMORIAL SCHOLARSHIPS**

These scholarships are the result of the annual interest from a bequest left to Memorial University of Newfoundland by Mr. Reid. Scholarships valued at two semesters tuition for a full course load, will be awarded annually to students of scholarship standing. These scholarships are open to both Entrance and Undergraduate students.

#### **ROYAL CANADIAN LEGION LADIES' AUXILIARY SCHOLARSHIPS**

Two scholarships to the value of \$300.00 each, tenable only at Memorial University of Newfoundland, will be awarded to children or grandchildren of veterans. These awards will be made to applicants with the highest scores in any year, providing they have resided in Newfoundland for a period of five years and have completed at least one year at Memorial University of Newfoundland. A special application is required and may be obtained from the Scholarships and Awards Office, Room 4018, University Centre or by calling (709) 737-3956.

#### **ROYAL CANADIAN LEGION (ST. JOHN'S BRANCH NO. 1) MEMORIAL WALL SCHOLARSHIPS**

These scholarships, three at \$1,000.00 each, have been donated by St. John's Branch No. 1 of the Royal Canadian Legion. They were made possible through funds raised in the construction of a Memorial Wall located at the Branch's club rooms. The scholarships are tenable only at Memorial University of Newfoundland to undergraduate students in any faculty, school or year and will be awarded on the basis of scholarship standing and financial need.

#### **R.S.V.P. RESIDENCE SCHOLARSHIP**

This scholarship is the result of fundraising by the Residence Scholarship and Volunteer Program (RSVP) Committee during the early 1990's. One or more scholarships will be awarded annually from the interest earned on the initial endowment. The scholarship(s) will be awarded to full-time undergraduate students who are beyond first year, resided in residence the previous year and are returning to residence for another year. To be considered candidates must have scholarship standing and must have been actively involved in various aspects of residence life. The scholarship(s) will be awarded by the Senate Committee on Under-graduate Scholarships and Financial Aid upon recommendation of the Director, Student Housing and Food Services.

#### **THE ST. JOHN'S PORT AUTHORITY SCHOLARSHIP**

This scholarship, valued at \$2,500.00, was established by the St. John's Port Authority. It will be awarded annually to a student who has lived at least twelve months in Newfoundland before commencing his or her post-secondary studies and who is entering third year or beyond in a marine related field. The scholarship shall be awarded on the basis of academic excellence.

#### **THE JEANNE F. SANGER MEMORIAL SCHOLARSHIP**

This scholarship, awarded annually in memory of Jeanne F. Sanger, former student and library staff member of Memorial University of Newfoundland, is under the sponsorship of the family and friends of the late Mrs. Sanger. It is awarded on the basis of scholarship standing and need to a second-year student upon completion of first-year studies. The value of the award will be based on income accruing from the fund during the period of tenure of the scholarship.

#### **THE DR. MAURICE SAVAL SCHOLARSHIP/BURSARY FUND**

This fund has been established through the generosity of Dr. Maurice Saval, one of the co-founders in St. John's of the Newfoundland American Insurance Company. From the interest accruing on the fund, a number of scholarships/bursaries will be awarded annually to financially needy and academically deserving undergraduate students. The awards will be open to full-time students in first and second year.

#### **SCEPTRE INVESTMENT COUNSEL LIMITED BURSARY**

Sceptre Investment Counsel, one of Canada's leading pension and mutual fund managers and an important partner to Memorial University of Newfoundland for several years, has established this bursary as a demonstration of its commitment to community support. Valued at the accrued interest on their endowment, one or more bursaries will be awarded annually on a rotating basis between undergraduate and graduate students in any field of study. Successful candidate(s) must be Newfoundland residents demonstrating financial need and displaying qualities of leadership. In the case of undergraduates, it will be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid using scholarship standing as the primary determinant. Graduate students can make application in writing to the Dean of Graduate Studies. The award will be made by the Dean on the recommendation of the Awards and Medals Committee.

#### **SODEXHO SCHOLARSHIP**

This scholarship, valued at the annual interest, is the result of a donation to the University from Sodexho. It will be awarded on the basis of scholarship standing to a full-time undergraduate student in any year or field of study.

#### **THE TORONTO ALUMNI SCHOLARSHIP**

This scholarship is being established through the fund raising efforts of the Toronto Alumni Branch of the Memorial University of Newfoundland Alumni Association. The scholarship, valued at a portion of the income on the investment, will be available to an undergraduate student, beyond first year, in any field of study who is a resident of Newfoundland and Labrador (a person who has

maintained permanent residence in the province for a minimum of twelve months immediately prior to entering the University) and who demonstrates both academic excellence and leadership qualities. Based on scholarship standing it will be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid on the recommendation of the Dean, Student Affairs and Services.

#### **THE JAMES TUCKER MEMORIAL SCHOLARSHIP**

This scholarship is the result of an endowment which began in 1997 as a part of the *Opportunity Fund Campaign*. The fund will provide a scholarship valued at a minimum of \$500 to students who are children, grandchildren, nieces, nephews or spouses of current, retired or deceased employees or former employees with a minimum of five years service in the Department of Technical Services, Memorial University of Newfoundland. Preference in awarding the scholarship will be given to entrance students but undergraduates may also qualify. The scholarship will be awarded on the basis of scholarship standing but in the case of ties between candidates, need may be used as a determining factor. A special application will be required and may be obtained from the Scholarships and Awards Office, Room 4018, University Centre, telephone (709) 737-3956.

#### **THE WABUSH MINES UNDERGRADUATE SCHOLARSHIPS**

Five scholarships, valued at \$5,000.00 each annually, will be awarded to permanent residents of the town of Wabush (somebody who has lived in Wabush for a minimum of twelve months prior to attending Memorial University of Newfoundland) who are in first or second year of any undergraduate program at Memorial University of Newfoundland. If five scholarships cannot be awarded in a given year, the number available will increase accordingly in the following year. These scholarships will be awarded by on the basis of scholarship standing.

#### **THE JAMES J. WALSH MEMORIAL SCHOLARSHIP**

These two scholarships, established by the Walsh family to commemorate the memory of a dear husband and father, James J. Walsh, are tenable at Memorial University of Newfoundland and are valued at \$500.00 each.

One scholarship will be tenable in the Faculty of Business Administration. (Refer to **Faculty of Business Administration**).

The second scholarship will be open to any student enrolled full-time at Memorial University of Newfoundland who has scholarship standing and demonstrates financial need.

#### **THE WOMEN'S ASSOCIATION OF MEMORIAL UNIVERSITY OF NEWFOUNDLAND FACULTY/STAFF SCHOLARSHIP**

The Women's Association of Memorial University of Newfoundland (WAMUN) has established a \$1,000.00 annual scholarship available to students in any faculty or year at Memorial University of Newfoundland, providing they are either:

- a. children of full-time faculty or staff; or
- b. children of deceased or retired faculty or staff, who at the time of death or retirement, were employed full-time.

This scholarship is based on scholarship standing. A special application is required and may be obtained from the Scholarships and Awards Office, Room 4018, University Centre or by calling (709) 737-3956.

#### **THE WOMEN'S ASSOCIATION OF MEMORIAL UNIVERSITY OF NEWFOUNDLAND MATURE STUDENT UNDERGRADUATE SCHOLARSHIP**

This scholarship, valued at \$1,000.00, is awarded annually from funds donated by the Women's Association of Memorial University of Newfoundland. It is restricted to women enrolling full-time or part-time at the University in Fall semester, who are entering or returning after at least five years out of full-time study. They must have been residents of Newfoundland for at least a year prior to enrolling. This scholarship is awarded in Winter semester on the basis of Fall semester results. The Scholarship will be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid on the basis of financial need and scholarship standing. A special application is required and may be obtained from the Scholarships and Awards Office, Room 4018, University Centre or by calling (709) 737-3956.

#### **THE WOMEN'S ASSOCIATION OF MEMORIAL UNIVERSITY OF NEWFOUNDLAND SINGLE PARENT UNDERGRADUATE SCHOLARSHIP**

This scholarship, valued at \$1,000.00, is awarded annually from funds donated by the Women's Association of Memorial University of Newfoundland. It is restricted to single parents enrolled in any faculty, school or year of study at Memorial University of Newfoundland. The Scholarship will be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid on the basis of financial need and scholarship standing. A special application is required and may be obtained from the Scholarships and Awards Office, Room 4018, University Centre or by calling (709) 737-3956.

#### **THE WOMEN'S ASSOCIATION OF MEMORIAL UNIVERSITY OF NEWFOUNDLAND UNDERGRADUATE SCHOLARSHIP**

This scholarship, valued at \$1,000.00, is awarded annually from funds donated by the Women's Association of Memorial University of Newfoundland. It is restricted to undergraduate students who are beyond second year of studies and who will continue at Memorial University of Newfoundland in an academic program. The Scholarship will be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid on the basis of scholarship standing.

#### **THE ZONTA CLUB SCHOLARSHIP**

This scholarship has been established by members of the Zonta Club to encourage and assist women to develop their full academic potential. Valued at a minimum of \$1,000.00, it is open to women enrolled in full-time undergraduate studies at Memorial University of Newfoundland who are entering or returning, having been away from full-time study for a period of five years or more. It will be awarded in Winter semester based on Fall semester's results whereby a minimum average of 75% will be required. In deciding on candidates of equal academic attainment, financial need may be considered.

## **3.2 Faculty of Arts**

The following are available to Faculty of Arts students based on a recommendation from the Dean, Faculty of Arts or the appropriate Director or Department Head.

#### **THE ATREYA-HARITHA SCHOLARSHIP IN MATHEMATICS**

This scholarship is the result of a generous donation by Dr. K.R. and Nandinin Kothandaraman. Valued at \$1000 annually, it will be awarded on the basis of scholarship standing to a full-time student, either a senior level undergraduate or a graduate student in Mathematics and/or Statistics. In the case of an undergraduate student, the scholarship will be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid upon recommendation of the Head, Department of Mathematics and Statistics. In the case of a graduate student, it will be awarded by the Dean, School of Graduate Studies, also upon recommendation of the head, Department of Mathematics and Statistics.

#### **THE EDNA BAIRD-STEPHENSON SCHOLARSHIP IN WOMEN'S STUDIES**

This scholarship, valued at \$500.00, has been established by the Memorial University of Newfoundland Alumni Association, through its Annual Fund. It honours distinguished alumna Edna Baird- Stephenson, B.A., B.H.S., one of the first female graduates of Memorial University College and long-time employee of Memorial University of Newfoundland, now retired. The scholarship is open to full or part-time students enrolled in the Women's Studies Program at Memorial University of Newfoundland who have successfully completed a

minimum of 21 credit hours in two of the three semesters in the previous scholarship year and achieved a minimum 75% average at the end of those two semesters. It is awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid, acting on a recommendation from the Women's Studies Program Coordinator.

#### **THE E.A. BISHOP (1889-1953) MEMORIAL SCHOLARSHIP**

This scholarship, established to honor the memory of E.A. Bishop, a teacher in Newfoundland and Labrador, is the result of a generous donation to Memorial University of Newfoundland by his son, John. Interest on the fund will provide a scholarship to full-time undergraduate students after completion of their first year at Memorial University of Newfoundland who are dependants of teachers in the public school system of Newfoundland and Labrador. Applicants must be students in the Faculties of Arts or Science and be of scholarship standing. The scholarship is valued at approximately two semesters tuition for five courses. If, in any year, there is no eligible candidate, the scholarship will not be awarded; however, a student may be awarded the scholarship more than once. It will be awarded on the basis of a special application which may be obtained from the Scholarships and Awards Office, Room 4018, University Centre or by calling (709) 737-3956.

#### **W.J. BLUNDON SCHOLARSHIP**

The W.J. Blundon Scholarship, in memory of Professor W.J. Blundon, Head of the Department of Mathematics and Statistics from 1948 to 1976, will be awarded on the basis of academic excellence to students majoring in Mathematics and/or Statistics. The scholarship will be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid on the recommendation of the Head of the Department of Mathematics and Statistics.

#### **THE ROD BROWNE FAMILY MEMORIAL SCHOLARSHIP**

This scholarship established by Mr. Rod Browne in memory of deceased members of the Browne family is tenable at Memorial University of Newfoundland and is valued at not less than \$1500. It is based on academics and awarded to a student majoring in French. Selection will be made by the Senate Committee on Undergraduate Scholarships and Financial Aid upon the recommendation of the Head, Department of French & Spanish.

#### **THE MAURICE J. BURKE MEMORIAL SCHOLARSHIP**

This scholarship, valued at approximately \$1,000.00 annually, was established by the family of the late Maurice Burke. Mr. Burke served in the Provincial Department of Education in the Teacher Certification Division for thirty-five years. He was also a columnist and author with a personal and professional interest in Newfoundland culture and folklore celebrating the uniqueness of Newfoundland outport life. It will be awarded alternately to a full-time graduate or undergraduate student in the Folklore Department on the basis of scholarship standing. In the case of undergraduates it will be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid. In the case of graduates it will be awarded by the Dean, School of Graduate Studies. In both cases the scholarship will be awarded on the basis of a recommendation from the Head, Department of Folklore.

#### **THE CANADIAN INSTITUTE OF MINING, METALLURGY AND PETROLEUM (NEWFOUNDLAND BRANCH) GOLDEN JUBILEE SCHOLARSHIP**

This scholarship valued at a portion of the income on the investment, will be awarded to a student entering the final year of undergraduate studies at Memorial University of Newfoundland. Based on scholarship standing, the scholarship will be available to a student majoring in a field of study that is covered by the fields of interest of the Canadian Institute of Mining, Metallurgy and Petroleum specifically; Earth Sciences, Geophysics, Geography, Economics, Environmental Science, Engineering, Business and Commerce. Financial need may be taken into consideration. The scholarship will be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid.

#### **THE CANADIAN TIRE SCHOLARSHIPS**

These scholarships are the result of an endowment to the University by Canadian Tire Corporation Limited as part of their commitment to community service and to Memorial University of Newfoundland via the *Opportunity Fund* Campaign. The endowment will fund three scholarships in the Faculty of Arts, valued at the annual interest on the initial endowment. The scholarships will be awarded to undergraduate students entering third or fourth year in the Faculty of Arts - one each to students majoring in Economics, Linguistics, and Sociology. They will be awarded by the Senate Committee Scholarships and Financial Aid on the basis of scholarship standing and a recommendation from the Head of each of the three academic departments.

#### **THE CAPTAIN JAMES COOK MEMORIAL SCHOLARSHIP**

A fund was established in 1979 by members of the Department of Geography to honour the memory of Captain James Cook (1728-79), explorer, navigator and cartographer, whose years of painstaking mapping of the coasts of Newfoundland and Labrador laid the basis for a comprehensive and scientific knowledge of the geography of the province.

One or more scholarships, valued at not less than \$600.00, will be awarded annually by the Senate Committee on Undergraduate Scholarships and Financial Aid on the recommendation of the Department of Geography to a student or students demonstrating particular merit in Geography.

#### **MICHAEL COOK SCHOLARSHIP**

The Michael Cook Scholarship will be awarded annually to a student who has completed English 3350 (Theatre) and English 3351 (The Physical Stage) and who shows definite promise and purpose in pursuing the study of theatre and drama at Memorial University of Newfoundland. The value of the scholarship is \$1,000.00. The award will be made by the Senate Committee on Undergraduate Scholarships and Financial Aid on the recommendation of the Head of the Department of English Language and Literature.

#### **THE JOHN AND JANE CROSBIE SCHOLARSHIP**

This scholarship is the result of an endowment to the University started by the Honourable John C. Crosbie, P.C., O.C., Q.C., in 1996 while he was Chancellor and Campaign Chair and further funded by volunteers of *The Opportunity Fund* in honor of Mr. Crosbie's commitment to Memorial University of Newfoundland. Valued at the annual interest on the initial endowment, the scholarship(s) (each valued at a minimum of \$1,000.00) will be awarded to one or more undergraduate student(s) beyond first year in the Faculty of Arts. It will be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid on the basis of scholarship standing and a recommendation from the Dean, Faculty of Arts.

#### **THE JOHN AND ANNA DALEY SCHOLARSHIP**

This scholarship, valued at a minimum of \$1,000.00 annually, has been established by the Daley family in honor of their parents John and Anna. It will be awarded on the basis of scholarship standing to an undergraduate student beyond first year in the Faculty of Arts. The scholarship will be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid upon recommendation of the Dean, Faculty of Arts.

#### **THE DR. MADELEINE DARTE SCHOLARSHIPS IN ENGLISH**

These scholarships, up to four each year and having a value of not less than \$250.00 each, have been established by Mrs. J.M. Darte and Mrs. France Darte McCabe in memory of Dr. Madeleine Darte, Lecturer and Assistant Professor of English at this University from 1971-75. In awarding these scholarships, preference will be given to students in the Honours program in English, but students in good standing in the General Degree program in English will also be considered. In addition to the student's academic record, financial need may also be taken into account. Applications for these scholarships should be sent to the Head of the Department of English. Awards

will be made by the Senate Committee on Undergraduate Scholarships and Financial Aid on the recommendation of the Department of English.

#### **THE SALLY DAVIS SCHOLARSHIP**

The Sally Davis Scholarship has been established to celebrate the memory and life work of Sally Davis. Contributions to the scholarship fund have come from family and friends who were so lovingly and generously influenced by Sally during her long life. The scholarship, valued at \$1000.00, will be awarded annually in the Spring Semester. Eligible candidates must be full-time students in the Master of Women's Studies program. Preference will be given to a candidate studying in one of the following areas: peace and international understanding, literacy, children, labour movement, gun control, or environment. If there is no qualified graduate applicant in a particular year, the award may be offered to an undergraduate (who is registered in a minor in Women's Studies) who is in financial need. An individual may receive the award twice but no more. In the case of graduates it is awarded by the Dean of Graduate Studies upon recommendation of the Co-ordinator, Women's Studies Program. In the case of undergraduates, the scholarship is awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid upon the recommendation of the Co-ordinator, Women's Studies Program.

#### **THE DOMINION OF CANADA GENERAL INSURANCE COMPANY SCHOLARSHIP**

This scholarship is the result of a donation to Memorial University of Newfoundland by the Dominion Group Foundation. The scholarship, valued at the annual interest, will be awarded to a student in first year of the Faculty of Arts. It will be awarded on the basis of scholarship standing and financial need.

#### **THE FACULTY OF ARTS DEAN'S LIST SCHOLARSHIP**

This scholarship, established by donors to the *Opportunity Fund* who have directed that their donations be used for scholarships within the Faculty of Arts, is valued at approximately \$1,000.00 annually. It is awarded to a student who achieves high ranking on the Dean's List of the Faculty of Arts and who meets the requirements for scholarship standing, but who is not in receipt of other significant scholarship funding. The award will be made by the Senate Committee on Undergraduate Scholarships and Financial Aid based on a recommendation from the Dean, Faculty of Arts.

#### **THE LEIDA FINLAYSON MEMORIAL SCHOLARSHIP**

This fund has been established by relatives and friends of Leida Finlayson, former General Manager of the Newfoundland Historic Trust. The scholarship, valued at a portion of the accrued interest, is to be awarded annually to a Memorial University of Newfoundland undergraduate student, beyond second year, studying political science and/or history. Based on scholarship standing and financial need the scholarship will be awarded to a resident of Newfoundland and Labrador (a person who has maintained permanent residence in the province for a minimum of twelve months immediately prior to entering the University). The scholarship will be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid based on a recommendation from the Dean, Faculty of Arts.

#### **THE E.B. FORAN MEMORIAL SCHOLARSHIP**

This scholarship, awarded in memory of the late Mr. E.B. Foran, longtime associate of municipal government in St. John's, is valued at \$500.00 and is sponsored by the Newfoundland and Labrador Federation of Municipalities. It is open to students beyond first year at Memorial University of Newfoundland who demonstrate scholarship standing and who are majoring in Political Science with an emphasis on municipal government. It will be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid based on a recommendation from the Head, Political Science Department.

#### **THE SENATOR EUGENE FORSEY SCHOLARSHIP**

Established by the Government of Newfoundland and Labrador, this scholarship honours a native Newfoundlander, Senator Eugene Forsey, as one of Canada's foremost authorities on the Canadian Constitution, and recognizes his great commitment to Canada and this province. The scholarship, tenable at Memorial University of Newfoundland, and valued at \$2,000.00, shall be awarded to a student in third year, or beyond, who has shown excellence in Canadian Policy Analysis or Canadian Governmental Studies.

#### **THE NICOLE FORTIER MEMORIAL SCHOLARSHIP**

The family and friends of Nicole Fortier have established this scholarship in her memory to encourage and assist women to develop their full academic potential. Valued at \$1,000.00, it is open to single mothers who are enrolled in full-time undergraduate studies at Memorial University of Newfoundland. First preference will be given to single mothers who are doing a major in Geography. In the event of no such eligible candidates it will be awarded to a single mother doing any undergraduate program. It will be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid taking into account financial need as well as scholarship standing.

#### **THE G. ALAIN FRECKER AND HELENA M. FRECKER MEMORIAL SCHOLARSHIP**

This scholarship has been established by the family of G. Alain Frecker and Helena M. Frecker to honour their parents' life-long commitment to Memorial University and to the pursuit of excellence in education. Helena M. Frecker was the first graduate of Memorial College and a long-time faculty member in the Department of English at Memorial University of Newfoundland. Dr. G. Alain Frecker was the first faculty member in the department of Engineering at Memorial College. He maintained a close relationship with Memorial University of Newfoundland as a senior public servant, as a member of the Provincial Cabinet, and as University Chancellor from 1971 to 1979. This scholarship, tenable at Memorial University of Newfoundland and valued at a portion of the accrued interest on the endowment, will be awarded to an undergraduate student beyond second year in the Faculty of Arts and majoring in the Humanities or any Social Science. It will be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid on the basis of scholarship standing and a recommendation from the Dean, Faculty of Arts.

#### **DANIEL FREEMAN MEMORIAL SCHOLARSHIP**

This scholarship was established from the contributions of many family members, friends, and fellow students in memory of Danny Freeman, a former Engineering student at Memorial University of Newfoundland. The scholarship, valued at a portion of the accrued interest, will be awarded annually, on a rotating basis, to students enrolled in either Engineering or Mathematics. Preference will be given to candidates with disabilities with consideration given to quality of character and overall perseverance. If a successful candidate is not recommended by the discipline on rotation in a given year an eligible student from the other discipline may be awarded the scholarship for that year. If no candidates are available from the first group any student enrolled in either Engineering or Mathematics (discipline to be determined by the rotation schedule in a given year) will be considered. This scholarship will be awarded by the Senate Committee on Undergraduate Scholarships and financial Aid on the recommendation of the Dean, Faculty of Engineering or the Head, Department of Mathematics and Statistics.

#### **THE ALLAN AND CLARA GILLINGHAM SCHOLARSHIP IN RUSSIAN STUDIES**

On the occasion of their fiftieth wedding anniversary, this scholarship has been established by Mr. and Mrs. Gillingham, who both hold fond memories of studying the Russian language themselves. Valued at \$500.00, this scholarship will be awarded annually to a student who is pursuing a program of Russian Studies at Memorial University of Newfoundland. Candidates will be selected on the basis of academic excellence. The scholarship will be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid, on the recommendation of the Head, Department of German and Russian.

#### **JAMES A. GOOD SCHOLARSHIP IN PHILOSOPHY**

This scholarship has been established by friends and colleagues in Memory of James A. Good. Mr. Good was a successful investment

banker and Partner at Capital Canada Limited in Toronto. He earned his B.A. in Philosophy and Political Science from Memorial University of Newfoundland, an M.A. in Philosophy from Dalhousie University, and undertook doctoral studies in Philosophy at the University of Toronto where he was also a lecturer. He was Chief of Staff to the Honourable John C. Crosbie, a position he maintained across the portfolios of Justice, Transport, Finance, International Trade and Fisheries. Valued at a portion of the income on the investment, the scholarship will be awarded to an undergraduate student majoring in Philosophy on the basis of scholarship standing and financial need. It will be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid on the recommendation of the Head, Department of Philosophy.

#### **THE GRAHAM FAMILY SCHOLARSHIP**

This scholarship, established by Mrs. Kathleen Birchall and Dr. David Graham, is valued at a portion of the income on the investment. It will be tenable at Memorial University of Newfoundland and will be awarded to an outstanding student majoring in French with preference given to students enrolled in the Honors program. It will be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid upon the recommendation of the Head, Department of French and Spanish.

#### **THE R. BERTRAM GREEN CLASS SCHOLARSHIP**

This scholarship is the result of a bequest to the University by Rev. Dr. Robert Bertram Green. Valued at the annual interest on the initial endowment, it will be awarded to an undergraduate student in second or third year in the Faculty of Arts, majoring in either Classical or Modern Languages, Economics, English, History, Philosophy, or Political Science. It will be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid on the basis of scholarship standing and a recommendation from the Dean, Faculty of Arts.

#### **THE MARY A. GRIFFITHS MEMORIAL BURSARY FUND FOR FOLKLORE FIELD RESEARCH (UNDERGRADUATE)**

This fund has been established by the Memorial University of Newfoundland Folklore Society in memory of Mary A. Griffiths, B.A. (Folklore). One or more bursaries valued at a minimum of \$250.00 each will be awarded annually to undergraduate folklore students who wish to pursue field research. The awards will be made by the Senate Committee on Undergraduate Scholarships and Financial Aid on the recommendation of the Head of the Department of Folklore. Selection will be made on the basis of a submitted research proposal as well as demonstrated financial need. Application forms and guidelines are available from and should be submitted to the Folklore Department. The deadline date for submission of applications is January 31. If there are no suitable candidates in a given year the bursaries will not be awarded.

#### **THE GUNTHER HARTMANN SCHOLARSHIP**

This scholarship has been established by family, friends and colleagues in memory of Dr. Gunther Hartmann who was a member of the Department of Political Science from 1968-2000. Dr. Hartmann fostered student interest in international affairs not only through his teaching, but through the United Nations Association and the Model United Nations programme. In awarding the scholarship preference will be given to a Political Science student, third year or beyond, who has excelled in courses in International Relations, International Organization, or International Law and has been active in Model United Nations or similar organizations. Based on scholarship standing the scholarship will be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid on the recommendation of the Head, Department of Political Science.

#### **THE MICHAEL HARRINGTON RESEARCH PRIZE IN NEWFOUNDLAND HISTORY**

This award was established by the family of Michael Francis Harrington Sr., journalist, author and Newfoundland historian. The prize is valued at a minimum of \$500.00 and will be awarded annually to an undergraduate or graduate student doing research in Newfoundland history. To be considered, undergraduate students must be history majors planning to do research for a course in Newfoundland history or towards an honours thesis. Graduate students must be writing a thesis on some aspect of Newfoundland history. In some instances it may be awarded as a travel grant which will assist students with travel expenses incurred while undertaking their research. In the case of undergraduates it will be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid upon recommendation of the Head, Department of History. In the case of graduates it will be awarded by the Dean, School of Graduate Studies, also upon recommendation of the Head, Department of History.

#### **THE AIDAN HENNEBURY MEMORIAL SCHOLARSHIP IN CLASSICS**

This scholarship is the result of an endowment to Memorial University of Newfoundland via the *Opportunity Fund Campaign* by the law firm of Martin, Whalen, Hennebury & Stamp in memory of former partner Mr. Aidan Hennebury. The donation will fund a scholarship valued at the annual interest on the endowment. The scholarship will be awarded to an undergraduate student beyond second year who is majoring in Classics. It will be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid on the basis of scholarship standing and a recommendation from the Head, Department of Classics.

#### **THE HOLLINGER ENGLISH LANGUAGE AND LITERATURE SCHOLARSHIP**

This scholarship, donated by Hollinger Inc., will be awarded to a Memorial University of Newfoundland student who is beyond second year and is majoring in English Language and Literature. It will be valued at the annual interest and will be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid on the basis of Scholarship Standing and upon recommendation of the Head, Department of English.

#### **DR. BYRON HYNES MEMORIAL SCHOLARSHIP**

Friends of Dr. Byron Hynes have established this scholarship in his memory. It is valued at \$1,000.00 and will be awarded on an annually rotating basis to a student majoring in either Economics or Geology. It will be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid on the basis of scholarship standing and a recommendation from the head of the appropriate department.

#### **THE IMPERIAL TOBACCO CANADA SCHOLARSHIP IN ARCHAEOLOGY**

This scholarship, established by Imperial Tobacco Canada in support of the *Opportunity Fund Campaign*, has a minimum value of \$2,000.00 annually. It will be awarded to a senior student in archaeology who is registered in (or is planning to enter) the honours program, specializing in historic archaeology. It will be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid upon the recommendation of the Head, Department of Anthropology.

#### **THE JEROBOAM POETRY PRIZE IN ENGLISH**

The proceeds from a sum of money donated to the University in 2001 by the editors of Jeroboam Books will be awarded in an annual poetry competition administered by the Department of English, Memorial University of Newfoundland. The competition will be open to full-time or part-time students in any year of study at the University upon submission of original, unpublished work. In keeping with the tradition of Jeroboam, the work should reflect some aspect of traditional or contemporary Newfoundland. Entry forms and further information may be obtained by contacting the Department of English. The selection of winners will be the responsibility of a special committee composed of the Department of English faculty members. The prize will be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid on the recommendation of the Head, Department of English Language and Literature.

#### **THE BAREND KIEFTE MEMORIAL AWARD**

This award was established by friends of Dr. Barend Kieft, in his memory. It is a book prize to be given annually to a student in Philosophy. It will be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid upon the recommendation of



the Head, Department of Philosophy.

#### **THE DR. B.K. KIM SCHOLARSHIP IN STATISTICS**

This scholarship will be awarded annually to an undergraduate student whose major subject of study is Statistics. The award honours the memory of the late Dr. B.K. Kim who taught in the Department of Mathematics and Statistics from 1976-84. The scholarship, with a value of at least \$500.00, will normally be based on academic achievement in third year and/or fourth year courses and will be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid on the recommendation of the Head, Department of Mathematics and Statistics.

#### **THE CORNELIA LEARNING/ANNIE BUTLER MOORES SCHOLARSHIP**

In memory of her maternal and paternal grandmothers, Mrs. Dorothy Young of Pasadena, California, has established the Cornelia Learning and Annie Butler Moores Scholarship in the Faculty of Arts. This perpetual scholarship, valued at approximately \$500.00, is open to Arts students of scholarship standing with demonstrated financial need.

#### **THE JOHN AND LUCY LEE AND FAMILY MEMORIAL BURSARY**

This bursar has been established by family members to honour the memory of John and Lucy Lee of Petty Harbour and their deceased children. It is valued at a portion of the interest on the endowment and will be awarded to a full-time student in Religious Studies. The recipient of this bursary will have demonstrated scholarship standing and financial need. It will be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid upon the recommendation of the Head, Department of Religious Studies.

#### **THE MRS. E.D. MATTHEWS MEMORIAL SCHOLARSHIP IN MATHEMATICS AND STATISTICS**

This scholarship honours the memory of the late Mrs. Evelyn Matthews who taught in the Department of Mathematics and Statistics, Memorial University of Newfoundland, from 1959-78. It has a value of at least \$500.00, and will be awarded on an annual basis to an undergraduate student whose major subject of study is Mathematics or Statistics. The scholarship will be based on academic merit and will be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid on the recommendation of the Head, Department of Mathematics and Statistics.

#### **THE SUSAN MCCORQUODALE MEMORIAL SCHOLARSHIP**

Established by her friends and colleagues, this scholarship honors the memory of Susan McCorquodale, former member of the Political Science department at Memorial University of Newfoundland. The scholarship will be valued at the annual interest on the endowment and shall be awarded to a senior student majoring in Political Science who is concentrating in one of the areas to which Susan was committed - Newfoundland Politics, Public Policy or Public Administration. It will be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid on the basis of a recommendation from the Head, Department of Political Science.

#### **THE REVEREND G. LLOYD MORGAN MEMORIAL SCHOLARSHIP**

This scholarship, awarded annually, has been donated by Mr. Baxter Morgan and his wife Lorraine to the Religious Studies Department of the University in memory of Mr. Morgan's brother, The Reverend G. Lloyd Morgan, B.A., B.D., who served with the United Church Ministry in Newfoundland for over twenty-five years.

It has a value of \$500.00 and is awarded for academic excellence to a student who has completed two years of study in the Religious Studies Department of the University. Preference will be given to a student who has a major interest in the comparative study of religion. The scholarship is awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid on the recommendation of the Head, Religious Studies Department.

#### **THE JOHN M. AND ELSA S. MORGAN SCHOLARSHIPS**

These scholarships have been bequested to the University by the late Dr. John M. Morgan, B.Sc., M.D., and have been named to commemorate Dr. Morgan and his wife Elsa. Up to twenty-five scholarships will be made available annually to undergraduate students who have completed at least one year of studies at Memorial University of Newfoundland within the areas specified below and who will be continuing in these programs. The scholarships, valued at a minimum of \$1,000.00 each, will be disbursed as follows:

- Five to the Faculty of Medicine
- Four to the School of Nursing
- Four to the Faculty of Education
- Four to the Department of Philosophy
- Four to the Department of Anthropology
- Two to the Department of Religious Studies (with preference to students of comparative religions)
- Two to students in Newfoundland Studies

The scholarships will be made on the basis of scholarship standing. Preference will be given, where possible, to students from the Port-de-Grave District.

#### **THE MUN CLASSICS SOCIETY PRIZE IN LATIN**

This prize has been established by the MUN Classics Society of 2001-2002 to reward students achieving academic excellence. This prize will be valued at approximately \$150.00 annually. It will be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid on the basis of a recommendation from the Head, Department of Classics, to the student who is working toward an undergraduate degree in Classics and receives the top mark in the Classics 1120 and 1121 (Introduction to Latin) courses on the St. John's campus.

#### **THE STEPHAN MUZYCHKA BURSARY IN SPANISH**

This bursary, valued at a portion of the annual interest, has been established by an endowment from the family of Professor Muzychka who taught Spanish Language and Literature at Memorial University of Newfoundland from 1960 until his death in 1985. Mr. Muzychka was born in 1926 in Pukiw, Ukraine. He attended the Ukrainian Teacher's Training College and later the University of Madrid where he received his MA in Philosophy in 1959. He joined Memorial University of Newfoundland's Department of Modern Languages (at the old Parade Street Campus) and later became Head of the Department of Spanish. First preference, for this bursary, will be to a student majoring or minoring in Spanish who is beyond second year. If no candidate is available from the first preference the bursary will be awarded to a student beyond second year studying modern languages. It will be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid on the basis of scholarship standing, financial need and a recommendation from the Head, Department of French and Spanish.

#### **THE NEWFOUNDLAND & LABRADOR HYDRO SCHOLARSHIPS**

These scholarships are the result of an endowment to the University provided by Newfoundland and Labrador Hydro. Valued at the annual interest on the endowment, up to ten of these scholarships will be awarded, initially in amounts of \$1,000.00 each and increasing as endowment income permits, to undergraduate students in the Faculty of Arts at the second year and beyond. Half of the available scholarships will be for students of scholarship standing majoring or minoring in one of the interdisciplinary programs in the Faculty, and half will be for students of scholarship standing who are named to the Dean's List and who achieve exceptionally high overall averages, normally 85% or better. Those directed at students enrolled in interdisciplinary programs will be awarded on the recommendation of interdisciplinary Program Coordinators; those for Dean's List students will be awarded on the recommendation of the Dean of Arts. In both cases financial need may be taken into consideration. Preference will be given to students meeting these criteria who are not

already in receipt of significant scholarship funding from other sources.

#### **THE NEWFOUNDLAND ST. ANDREWS SOCIETY SCHOLARSHIP**

This scholarship is the result of a gift from the Newfoundland St. Andrews Society to Memorial University of Newfoundland. Valued at a portion of the interest on an endowment, the scholarship will be awarded to a student from the Faculty of Arts whose studies and accomplishments most closely support the aims of the Newfoundland St. Andrew's Society; To foster and encourage the love of Scotland, its history, literature, music and national games in a Newfoundland context. The scholarship will be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid on the basis of scholarship standing and a recommendation from the Dean, Faculty of Arts.

#### **THE HONOURABLE FABIAN A. O'DEA Q.C., LL.D SCHOLARSHIP**

This scholarship has been established by the O'Dea family in memory of their father, the Honourable Fabian O'Dea; Memorial University of Newfoundland Alumnus, Rhodes Scholar, Lieutenant Governor of Newfoundland, and recipient of honorary degrees from both Memorial University of Newfoundland and The Law Society of Newfoundland. It is valued at \$1,000 per year. To commemorate Dr. O'Dea's work in Newfoundland cartography, the scholarship is to be awarded to a student majoring in Geography who achieves scholarship standing. Preference is to be given to a student who is physically or learning disabled but if there is no such candidate in a given year it will be awarded to any eligible undergraduate Geography student. The scholarship is to be awarded by The Senate Committee on Undergraduate Scholarships and Financial Aid upon the recommendation of the Head, Department of Geography.

#### **THE DR. PAUL O'NEILL SCHOLARSHIP FOR EXCELLENCE IN NEWFOUNDLAND AND LABRADOR STUDIES**

The Historic Sites Association of Newfoundland and Labrador established this scholarship in honour of Dr. Paul O'Neill, LL.D., C.M., in recognition of his contributions to the study and promotion of Newfoundland and Labrador culture and history. The scholarship is valued at \$1000 and will be awarded annually to an undergraduate student at Memorial University of Newfoundland, who is enrolled in a Bachelor of Arts degree program. There is no restriction by major or minor, but applicants must have shown excellence and outstanding enthusiasm and interest in some area of Newfoundland Studies as part of their degree program. Preference will be given to a student who has not received other major scholarships in the same academic year. It will be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid upon recommendation of the Dean, Faculty of Arts.

#### **THE SENATOR GERALD R. OTTENHEIMER LANGUAGE SCHOLARSHIP**

This scholarship, valued at the annual interest on the initial endowment, has been established via *The Opportunity Fund* in memory of Senator Ottenheimer through the generosity of White Ottenheimer & Baker, Barristers & Solicitors. It will be awarded on a rotating basis to students majoring in one of the language programs or the English Language and Literature programs at Memorial University of Newfoundland (graduate or undergraduate). At the undergraduate level it will be awarded on the basis of scholarship standing to a student in second year or beyond who plans to pursue one of the above noted areas of specialization. In the case of graduate students it will be awarded to a full-time student doing the Masters of Arts in one of the disciplines noted. If the successful candidate is an undergraduate, the scholarship will be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid. If the winner is a graduate student, it will be awarded by the Dean, School of Graduate Studies. In both cases it will be awarded on the basis of a recommendation from the Dean, Faculty of Arts.

#### **THE STUART O. PIERSON PRIZE**

The Stuart Pierson prize, valued at a portion of the annual interest, will be awarded annually on the joint recommendation of the Head of the History department and the Coordinator of the Masters of Philosophy program in Humanities. Eligible students will be enrolled full time, in either the Masters of Philosophy Humanities program, or in the MA or BA Hons. programs in History. Preference will be given to students who show particular promise in the history of ideas, historiography, or the history of science. In the case of undergraduate students, the scholarship is awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid. In the case of graduate students, it will be awarded by the Dean, School of Graduate Studies.

#### **MARY PITTMAN-ROBBINS SCHOLARSHIP IN ARCHAEOLOGY**

This scholarship, valued at a portion of the income on the investment, has been established by students and colleagues of Mary Pittman-Robbins of the Department of Archaeology. The scholarship is to be awarded to an Archaeology or Physical Anthropology student based on scholarship standing. The scholarship will be awarded by the Senate Committee on Undergraduate Scholarships and Financial aid on the recommendation of the Head, Department of Anthropology.

#### **THE DR. CLARENCE W. POWELL MEMORIAL SCHOLARSHIP**

This scholarship was established in memory of honorary graduate of Memorial University of Newfoundland, Dr. Clarence W. Powell. It is valued at a minimum of \$1,000.00 annually and will be awarded to a student entering the third year of the Political Science Program who has scholarship standing, has shown leadership in university and/or community activities and who has not received another scholarship administered by the Senate Committee on Undergraduate Scholarships and Financial Aid. It will be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid upon recommendation of the Head, Department of Political Science.

#### **THE BOBBIE ROBERTSON SCHOLARSHIP IN HISTORY**

This scholarship was established by friends, family and colleagues of the late Bobbie Robertson. It will be valued at the annual accrued interest on the initial endowment and will be awarded on the basis of scholarship standing to a history major with preference given to students in Newfoundland and Labrador history. It will be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid upon recommendation of the Head, Department of History.

#### **THE DR. GRENVILLE R. ROBINSON AWARD IN FRENCH**

This award was established in memory of the late Dr. Grenville Robinson, a former professor of the French Department at Memorial University of Newfoundland. Valued at \$250.00 annually, it will be awarded each Spring to a student in the Department of French on the basis of his/her performance in any three or more of the following French courses: 3500, 3501, 3502, 3700 and 3701 and his/her contribution to the general activities of the department. The successful recipient must be a full-time student and have completed between 60-90 credit hours towards a Bachelor of Arts at Memorial University of Newfoundland with a major or minor in French. The recipient will also receive a book prize and a certificate. This award will be made by the Senate Committee on Undergraduate Scholarships and Financial Aid upon recommendation of the Head, Department of French and Spanish.

#### **THE ROTARY CLUB (ST. JOHN'S NORTHWEST) SCHOLARSHIP**

This scholarship has been established by the Rotary Club of St. John's Northwest. It is valued at \$1,000.00 annually and will be awarded to a full-time student beyond first year, pursuing a Bachelor of Arts or a Bachelor of Science with a major in one of the Social Sciences, who has demonstrated a commitment to community service. The recipient of this scholarship will be a long-term resident of Newfoundland and Labrador who completed high school in this province and will have demonstrated scholarship standing. It will be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid upon the joint recommendation of the Dean of Arts and the Dean of Science. This scholarship will be presented at one of the regular meetings of the Rotary Club of St. John's Northwest and the recipient will be asked to speak about their goals and community service work.

#### **DR. EDWARD ("TED") RUSSELL SCHOLARSHIPS IN ENGLISH**

In memory of Dr. Edward ("Ted") Russell, author and teacher, who was a Lecturer and Assistant Professor of English at this University

from 1965-73, a fund has been established to provide one or more scholarships for students majoring in English. These scholarships will be awarded to promising students who have completed their first year of University studies and are entering the second year of a degree program with English as their major subject. In addition to the student's academic records, financial need may also be taken into account. Applications should be sent to the Head of the Department of English. Awards will be made by the Senate Committee on Undergraduate Scholarships and Financial Aid on the recommendation of the Department of English.

#### **THE RUSSIAN AMBASSADOR'S AWARD FOR EXCELLENCE IN RUSSIAN LANGUAGE AND LITERATURE**

This award was established in 1999 to commemorate the 200th Anniversary of the birth of the Russian poet Alexander Pushkin. It is a book prize to be given annually for outstanding achievements in studying the Russian Language and Literature. It will be awarded to an honours student in the Russian Language and Literature program at Memorial University of Newfoundland. It will be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid upon the recommendation of the Coordinator, Russian Programs.

#### **THE SCOTIABANK BURSARIES FOR INTERNATIONAL STUDY**

These bursaries, funded by a generous donation from Scotiabank to *The Opportunity Fund*, are intended to help students broaden their educational experience and cultivate an international perspective through study abroad while pursuing studies in the Faculty of Arts at Memorial University of Newfoundland. Fifteen or more bursaries will be available with approximately ten at the undergraduate level valued at \$1,000.00 each and five at the graduate level valued at \$2,000.00 each. The undergraduate bursaries will be awarded on the basis of scholarship standing to full-time students who are participating in one of the overseas Field Schools or study abroad opportunities sponsored by the Faculty of Arts. These include the Arts semester in Harlow (every Fall) as well as Summer programs at Harlow and in other countries such as Ireland, Malta, Russia, etc. In addition, students wishing to participate in formal exchange programs through the faculty of Arts, such as those with the University of Keele, will also qualify. The graduate bursaries will be based on academics as well and will assist full-time Faculty of Arts master's and doctoral students (including those in interdisciplinary programs) to travel to other countries for the purpose of thesis research and thesis-related study. In both cases financial need may be taken into consideration. In the case of undergraduates the bursaries will be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid. In the case of graduates they will be awarded by the Dean, School of Graduate Studies. In both cases the bursaries will be awarded on the basis of a recommendation from the Dean, Faculty of Arts.

#### **RON AND GWEN SEARY MEMORIAL SCHOLARSHIP**

Two scholarships from the interest on a fund established by the family, colleagues and students of Ron and Gwen Seary shall be awarded. One scholarship shall be given to a student beyond second year who is majoring in English Language and Literature and who is recommended by the Head of the Department. One scholarship shall be awarded to a student in Primary/Elementary Education who shows promise in Art Education and who is recommended by the Dean, Faculty of Education.

#### **THE ROBERTA H. SELLARS SCHOLARSHIP**

This scholarship is the result of an endowment by the Rev. Walter C. Sellars in recognition of his wife Roberta for her loyal and loving support, particularly while he was struggling through university. The scholarship will be awarded annually to a full-time student in any year in either the Faculty of Arts or Science on a rotating basis. It will be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid based on scholarship standing and financial need and upon the recommendation of the appropriate Dean.

#### **SPURRELL-BARTLETT BURSARY**

This bursary was endowed by Morris and Janet Bartlett to honor their parents, Willis and Marjorie Spurrell and Francis and Jane Bartlett, who were devoted to the promotion of education in Newfoundland. It is valued at the annual accrued interest and is available to students in the Faculty of Arts, preferably from rural Newfoundland and Labrador. The bursary shall be awarded based on scholarship standing and need.

#### **THE ST. AIDEN'S PRESBYTERIAN CHURCH MEMORIAL SCHOLARSHIP**

This scholarship, valued at approximately \$1,000.00 will be awarded annually to a student who has completed at least two years of study in the Department of Religious Studies at Memorial University of Newfoundland. It will be awarded annually on the basis of scholarship standing and need. This scholarship is awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid on the recommendation of the Head, Department of Religious Studies.

#### **DR. SIEGFRIED THOMEIER MEMORIAL PRIZE IN PURE MATHEMATICS**

The prize, the interest from a donation by an anonymous donor, is awarded to a fourth or fifth year student majoring in Mathematics with a concentration in Pure Mathematics. The award is made by the Senate Committee on Undergraduate Scholarships and Financial Aid upon the recommendation of the Head, Department of Mathematics and Statistics.

#### **THE ROBERT WESTCOTT MEMORIAL SCHOLARSHIP**

This scholarship was established by Mrs. Mary Westcott in memory of her late husband, Mr. Robert Westcott. It is valued at a portion of the annual interest on an endowment and will be awarded on a rotating basis to students beyond first year who have a strong commitment to post-secondary education and who are majoring in Business Administration and/or Economics. It will be based on scholarship standing and financial need and will be awarded to a student who was born in Newfoundland and Labrador. This scholarship will be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid upon the recommendation of the Dean/Department Head of the appropriate discipline.

#### **THE DR. LOUISE WHITEWAY PRIZE IN NEWFOUNDLAND HISTORY**

A bequest to the University by the late Dr. Louise Whiteway has funded a \$100.00 prize in Newfoundland history. The prize will be awarded annually to a Memorial University of Newfoundland student who is considered to be the most promising student in Newfoundland history. The award will be made by the Senate Committee on Undergraduate Scholarships and Financial Aid acting on the recommendation of the Head, Department of History.

#### **THE JACQUES WHITFORD NEWFOUNDLAND GEOSCIENCE SCHOLARSHIP**

This scholarship, valued at the annual interest on their endowment, has been established by Jacques Whitford Environment Limited and Newfoundland Geosciences Limited as a contribution to the *Opportunity Fund Campaign*. It will be awarded on an annually rotating basis to students in the Faculty of Engineering and Applied Science (particularly Civil Engineering), the Faculty of Science (particularly Biological Sciences) and Archaeology. Successful candidates are to be of scholarship standing and preferably show an interest in environmental issues. The scholarship will be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid upon recommendation from the Dean/Director/Department Head of the appropriate discipline.

#### **THE DR. JOHN WHITTAKER MEMORIAL PRIZE IN GREEK**

This prize is in memory of Dr. John Whittaker, former professor of Classics at the University. The prize will be valued at approximately \$150.00 annually. It will be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid on the basis of a recommendation from the Head, Department of Classics, to the student who is working toward an undergraduate degree in classics and receives the top mark in the Classics 1130 and 1131 (Introduction to Greek) courses on the St. John's campus.

#### **THE HONOURABLE GORDON A. WINTER, O.C. SCHOLARSHIP**

This scholarship, donated by The Standard Manufacturing Company in recognition of the contribution of the Honourable Gordon A.

Winter to the public life of Newfoundland and Labrador, is awarded annually for academic excellence to a student entering fourth-year political science. The award, valued up to \$500.00, will be made by the Senate Committee on Undergraduate Scholarships and Financial Aid on the recommendation of the Head, Department of Political Science. The value of the award will be determined by the interest accruing on the fund.

**xwave JAMIE MORRY MEMORIAL SCHOLARSHIP**

This scholarship, valued at \$2000.00 has been established by xwave in memory of Jamie Morry, a valued employee. It will be awarded annually to a student of scholarship standing and financial need enrolled in the Faculty of Arts who is doing a program in either Newfoundland Studies or Folklore. If no student meeting the above criteria is eligible, the scholarship will be open to any undergraduate student in the Faculty of Arts. It will be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid upon recommendation by the Dean, Faculty of Arts.

### 3.3 Faculty of Business Administration

The following are available to students in the Faculty of Business Administration based on a recommendation from the Dean. For definition of scholarship standing for co-op students, see **Scholarships, Bursaries and Awards, General Information**,

**THE BAINE JOHNSTON CORPORATION SCHOLARSHIP FOR INTERNATIONAL STUDY**

This scholarship was established from contributions to the University's *Opportunity Fund* Campaign by Baine Johnston Corporation. Valued at the annual interest on the endowment, the scholarship will be awarded to an undergraduate Business student who is on an academic international exchange or on a Harlow term. This scholarship will be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid upon a recommendation from the Dean, Faculty of Business Administration.

**THE LAWRENCE S. BLOOMBERG SCHOLARSHIP IN BUSINESS ADMINISTRATION**

This scholarship was established by a donation from First Marathon Securities to Memorial University of Newfoundland's *Opportunity Fund* Campaign. The scholarship, valued at the annual accrued interest, will be awarded to an undergraduate student in the Faculty of Business Administration. The award will be made by the Senate Committee on Undergraduate Scholarships and Financial Aid upon the recommendation of the Dean, Faculty of Business Administration.

**THE ERIC BRIFFETT SMALL BUSINESS SCHOLARSHIP**

This scholarship valued at \$1,000.00, was established in honor of Eric Briffett by his four children. Mr. Briffett was born in Rosedale, Newfoundland in 1916. He, along with his brothers, formed and operated Louis Briffett and Sons Ltd. a successful logging, sawmilling, lumber, and building supply business in Central and Eastern Newfoundland, with retail outlets in Glovertown and Pound Cove, Bonavista Bay. He retired in 1988 at the age of 71. The scholarship will be awarded to a second or third year undergraduate Business student who was born in Newfoundland and Labrador or whose parents were born in Newfoundland and Labrador. Preference will be given to students studying Small Business and/or Entrepreneurship. The scholarship shall be awarded on the basis of financial need, personal values and scholarship standing. The qualifying student must demonstrate strong personal values including a strong work ethic and high personal integrity. The student must have maintained a minimum of a B average in the prior semester. The scholarship will be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid upon recommendation of the Dean, Faculty of Business Administration.

**THE BRISTOL GROUP SCHOLARSHIP FOR INTERNATIONAL STUDY**

This scholarship, valued at a portion of the annual interest, is available to undergraduate students, in the Faculty of Business Administration. It was established with contributions from The Bristol Group. It is awarded to recognize students of scholarship standing who are participating either on an exchange term or Harlow term and who have a demonstrated interest in international studies. Students who are considered for this scholarship are expected to be completing courses which fulfill a concentration in marketing. The scholarship will be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid upon the recommendation of the Dean, Faculty of Business Administration.

**THE BROOKFIELD DAIRY GROUP SCHOLARSHIP**

This scholarship was established from contributions to the Memorial University's *Opportunity Fund* Campaign by The Brookfield Dairy Group. This scholarship, which will be valued at a portion of the accrued interest on the endowment, is intended to recognize academic excellence and will be awarded to a Newfoundland and Labrador student entering term 5 of the Business Cooperative Education program. It will be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid on the basis of scholarship standing and a recommendation from the Dean, Faculty of Business Administration.

**THE BROWNING HARVEY LTD. SCHOLARSHIP**

This scholarship, valued at \$1,000.00, has been donated by Pepsi-Cola Ltd. It is open to undergraduate students of scholarship standing, enrolled in Business Administration, who have demonstrated leadership ability. Activities within various student organizations, participation on faculty committees, and/or contribution to the larger community, will be considered in determining appropriate candidates. The scholarship is awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid on the recommendation of the Dean, Faculty of Business Administration.

**THE GREG CAMPBELL MEMORIAL BUSINESS AWARD**

This award is the result of a generous donation by Eleanor Swanson in memory of her late husband, J. Gregory Campbell. Interest on the fund will provide one award to a full-time undergraduate student in the Faculty of Business Administration who is entering the final year of study. Candidates for this award must have a demonstrated record of active community involvement, volunteer work, and/or service in the Faculty/University. It will be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid upon the recommendation of the Dean, Faculty of Business Administration.

**THE GREG CAMPBELL MEMORIAL BUSINESS SCHOLARSHIP**

This scholarship is the result of a generous donation by Eleanor Swanson in memory of her late husband, J. Gregory Campbell. Interest on the fund will provide one scholarship to a full-time undergraduate student in the Faculty of Business Administration who is entering the final year of study. Candidates for this scholarship must have scholarship standing and a demonstrated record of active community involvement, volunteer work, and/or service in the faculty/University. The scholarship will be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid upon the recommendation of the Dean, Faculty of Business Administration.

**THE CANADIAN INSTITUTE OF MINING, METALLURGY AND PETROLEUM (NEWFOUNDLAND BRANCH) GOLDEN JUBILEE SCHOLARSHIP**

This scholarship valued at a portion of the income on the investment, will be awarded to a student entering the final year of undergraduate studies at Memorial University of Newfoundland. Based on scholarship standing, the scholarship will be available to a student majoring in a field of study that is covered by the fields of interest of the Canadian Institute of Mining, Metallurgy and Petroleum specifically; Earth Sciences, Geophysics, Geography, Economics, Environmental Science, Engineering, Business and Commerce. Financial need may be taken into consideration. The scholarship will be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid.

**THE CERTIFIED GENERAL ACCOUNTANTS ASSOCIATION OF NEWFOUNDLAND SCHOLARSHIP**

The C.G.A. Association of Newfoundland offers a \$1,000.00 scholarship to a student majoring in Accounting who is entering the final year of studies. In addition to the cash award, \$1,000.00 will be applied to the student's tuition costs through enrolment in the C.G.A. program within three years of their undergraduate University graduation date. This scholarship is intended to recognize academic excellence and to assist the student when there is a financial need. It will be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid, upon the recommendation of the Dean, Faculty of Business Administration.

**THE CHARTERED ACCOUNTANTS' EDUCATION FOUNDATION OF NEWFOUNDLAND, INC. SCHOLARSHIP**

The CA Education Foundation, formed by the Institute of Chartered Accountants of Newfoundland, offers five scholarships annually to students enrolled in the B.Comm.(Co-op) programs as follows:

- two scholarships of \$2000 each to students entering either term six or seven
- two scholarships of \$1250 each to students entering term five
- one scholarship of \$1250 to a student entering term four

These scholarships will be awarded to students who have expressed a strong interest in pursuing the Chartered Accounting designation. Selection will be based upon academic standing and demonstrated leadership abilities. The scholarships will be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid on the recommendation of the Dean, Faculty of Business Administration.

**THE ROB CROSBIE SCHOLARSHIP FOR INTERNATIONAL STUDY**

This fund was established from contributions to the University's *Opportunity Fund* Campaign by Mr. Rob Crosbie. The scholarship, valued at \$1,250.00 annually, will support a Business student (graduate or undergraduate) who is on an academic international exchange and who has shown interest in pursuing a career in the oil and gas industry. In the case of undergraduate students, the scholarship will be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid upon the recommendation of the Dean, Faculty of Business Administration. In the case of graduate students, it will be awarded by the Dean, School of Graduate Studies upon recommendation of the Faculty Committee on Graduate Studies.

**THE DAIMLERCHRYSLER SCHOLARSHIP**

This scholarship, valued at \$5,000.00 annually, is the result of a generous endowment to Memorial University of Newfoundland by DaimlerChrysler Canada Inc. in support of The *Opportunity Fund*. The scholarship will be available to an undergraduate student in the Faculty of Business Administration who is in second year or beyond. It will be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid on the basis of scholarship standing and a recommendation from the Dean, Faculty of Business Administration.

**THE ERNST AND YOUNG SCHOLARSHIP IN INTERNATIONAL BUSINESS**

This fund was established from contributions to the University's *Opportunity Fund* Campaign by the partners Ernst & Young, St. John's and its predecessor. This scholarship, valued at the accrued interest on the endowment, will be awarded to an undergraduate student in the Faculty of Business Administration entering academic Term 6 in the cooperative education program. In awarding this scholarship, preference will be given to students with scholarship standing and a demonstrated interest pursuing a career in accounting. The scholarship will be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid upon the recommendation of the Dean, Faculty of Business Administration.

**FACULTY OF BUSINESS ADMINISTRATION ASSOCIATES' SCHOLARSHIP FUND**

This fund was established through the contributions of members of the Associates' Program of the Faculty of Business Administration. The fund will provide scholarships for undergraduate and graduate students in the Faculty. Awards will be made on the basis of academic standing but such factors as financial need and contribution to the Faculty may be taken into account.

In the case of the undergraduate program, scholarships will be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid on the recommendation of the Dean, Faculty of Business Administration. In the case of the graduate program, the scholarships will be awarded by the Dean of Graduate Studies on the recommendation of the Dean of Business Administration.

**FISHERY PRODUCTS INTERNATIONAL LIMITED UNDERGRADUATE SCHOLARSHIPS**

Fishery Products International Ltd. offers annually two scholarships valued at \$1000.00 each tenable at Memorial University of Newfoundland. One scholarship is available to a student in the Faculty of Engineering and Applied Science and the second one to a student in the Faculty of Business Administration. In order to qualify candidates must be enrolled in term 1 of the respective programs and be of scholarship standing. Preference will be given to dependants of employees of Fishery Products International Limited who must complete a special application which may be obtained from: Head Office, Fishery Products International Ltd., 70 O'Leary Avenue, P. O. Box 550, St. John's, NL, A1C 5L1. If there are no suitable candidates in this category the scholarships will be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid based on a recommendation from the dean of the appropriate academic unit.

**THE P.J. GARDINER AWARD FOR SMALL BUSINESS AND ENTREPRENEURSHIP**

This fund was established from contributions to the University's Anniversary Fund to commemorate the memory of the late Peter Gardiner, a former Director of Memorial University of Newfoundland's School of Business and local entrepreneur. Interest from the fund provides an annual award of \$5,000.00 to recognize student creativity, innovation and entrepreneurship as evidenced by the establishment or plan to establish a new venture. Students at all levels of their business program (graduate or undergraduate) are eligible for the award. In order to be considered for an award, applicants must submit a Venture Plan in the case of a proposed venture or a detailed description of a venture that they have already established. The submissions will be reviewed by a panel consisting of representatives from Industry and from the Faculty. In the case of undergraduate students, the awards will be made by the Senate Committee on Undergraduate Scholarships and Financial Aid acting on the recommendation of this panel. In the case of graduate students, the awards will be made by the Dean of Graduate Studies acting on the recommendation of the panel and the Faculty Committee on Graduate Studies.

**THE PETER GARDINER AWARD FOR INTERNATIONAL STUDY**

This fund was established from contributions to the University's Anniversary Fund to commemorate the memory of the late Peter Gardiner, a former Director of Memorial's School of Business. Interest from the fund will provide or two annual awards of \$2,500.00 each to support Business students (graduate and/or undergraduate) to study at Memorial University of Newfoundland's Harlow Campus or at another university outside Canada. In the case of undergraduate students, the awards will be made by the Senate Committee on Undergraduate Scholarships and Financial Aid upon the recommendation of the Dean, Faculty of Business Administration. In the case of graduate students, the awards will be made by the Dean of Graduate Studies upon recommendation of the Faculty Committee on Graduate Studies.

**THE BRIAN J. GRANT SCHOLARSHIP FOR INTERNATIONAL STUDY**

This scholarship was endowed through a donation to the University's *Opportunity Fund* campaign by Mr. Brian J. Grant in 1999. The scholarship, valued at the annual interest on the endowment, will support an undergraduate business student who is on an academic international exchange. The scholarship will be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid upon the recommendation of the Dean, Faculty of Business Administration.

**THE GREAT-WEST LIFE SCHOLARSHIP IN BUSINESS ADMINISTRATION**

This scholarship was established by a donation to Memorial University of Newfoundland from Great-West Life. One scholarship, valued at a minimum of \$1500 annually, will be awarded to an undergraduate student in the Faculty of Business Administration. The scholarship will be awarded to a student who has been involved in student life and has made a contribution to the university community through his/her leadership on campus. The scholarship will be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid on the basis of scholarship standing and a recommendation from the Dean, Faculty of Business Administration.

**THE WILLIAM A. GRUCHY MEMORIAL SCHOLARSHIP**

This scholarship, valued at \$1000.00, has been donated by Pepsi-Cola Canada Ltd., in memory of Mr. William Gruchy, a long-time associate of Browning Harvey Ltd., Pepsi-Cola's franchised bottling business in St. John's. The award is open to undergraduate students of scholarship standing, enrolled in Business Administration, who have demonstrated leadership ability. Activities within various student organizations, participation on faculty committees, and/or contribution to the larger community, will be considered in determining appropriate candidates. The scholarship is awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid on the recommendation of the Dean of the Faculty of Business Administration.

**THE JAMES B. HAND MEMORIAL SCHOLARSHIP IN BUSINESS ADMINISTRATION**

This scholarship was established through a contribution to the *Opportunity Fund* by friends, family and former business associates in memory of Mr. Jim Hand. Interest on the fund will provide one or more scholarships for undergraduate students in the Faculty of Business Administration. The scholarship(s) will be awarded on the basis of scholarship standing, but such factors as financial need and contribution to Business Administration may be taken into account. The scholarship(s) will be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid on the recommendation of the Dean, Faculty of Business Administration.

**THE ROLF G. HATTENHAUER SCHOLARSHIP FUND**

This fund was established by the Labour Management Co-operation Committee to commemorate the late Professor Rolf G. Hattenhauer, a well-known Newfoundland arbitrator who was actively involved in setting up the Committee. Professor Hattenhauer was a member of the Department of Commerce (later the Faculty of Business Administration) at Memorial University of Newfoundland from 1965 until his death in 1983, and during the year 1969-70 served as Head (pro tem) of the Department. The fund will provide scholarships and fellowships on a rotating basis in undergraduate and graduate studies in Business Administration.

In the case of the undergraduate scholarships, preference will be given to students in Terms 6 and 7 of the Bachelor of Commerce program who are majoring in Labour Relations. These scholarships will be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid on the recommendation of the Dean of Business Administration.

In the case of the graduate fellowships, preference will be given to those students in the Master of Business Administration program who are concentrating in or conducting research on the area of personnel and industrial relations. The graduate fellowships will be awarded by the Dean of Graduate Studies on the recommendation of the Dean of Business Administration. If a suitable graduate student is not available in a given year the scholarship for that year may be awarded to an undergraduate student.

**HIBERNIA SCHOLARSHIPS**

These scholarships, established by the Hibernia Management and Development Company Ltd. and tenable at Memorial University of Newfoundland, are valued at approximately \$1,000.00 each and awarded annually as follows:

- 2 to students entering Term 3 of the Faculty of Engineering and Applied Science
- 2 to students entering Term 3 of the Faculty of Business Administration

Each year one scholarship will be awarded to a male and one to a female in each of the above disciplines. Candidates for these awards must be of scholarship standing but consideration may also be given to their financial circumstances. All candidates must be residents of Newfoundland and Labrador (a person who has maintained permanent residence in the province for a period of 12 months immediately prior to enrollment for the term of study). The awards will be made by the Senate Committee on Undergraduate Scholarships and Financial Aid on the recommendation of the Deans, Faculty of Business Administration and Faculty of Engineering and Applied Science.

**THE JIM HOOD MEMORIAL SCHOLARSHIP**

This scholarship was established through the generous bequest of Jim Hood, an alumnus and friend of the Faculty of Business Administration. Valued at a portion of the income on the investment, the scholarship is open to full-time undergraduate and graduate students in the Faculty of Business Administration who meet scholarship standing and who have been active in athletics at Memorial University of Newfoundland and/or in the community. In the case of the undergraduate student, the scholarship will be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid on the recommendation of the Dean of Business Administration. In the case of the graduate student, the scholarship will be awarded by the Dean of Graduate Studies on the recommendation of the Dean of Business Administration.

**THE J. CARSON HUDSON MEMORIAL SCHOLARSHIP**

In memory of local businessman and entrepreneur J. Carson Hudson, this scholarship, valued at a portion of the income on the investment, has been established by LeGrow's Travel Limited to encourage students' participation in small business and to assist a student entering the Faculty of Business Administration. This scholarship is renewable for two successive academic years provided that scholarship standing has been maintained. Preference will be given to those students who have enrolled in a full course load at the undergraduate level and have been away from the educational system for a period of two years or longer, working in an area of small business. Financial need may be a consideration. The scholarship will be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid on the recommendation of the Dean, Faculty of Business Administration.

**THE SCOTT HUSSEY AND KAREN JOSEPH MEMORIAL SCHOLARSHIP IN BUSINESS ADMINISTRATION**

This scholarship was established from contributions to Memorial University of Newfoundland by fund raising efforts of the Commerce Class of 1985 and other friends and relatives of Scott and Karen. The scholarship, valued at a portion of the annual income, will be awarded to an undergraduate student beyond Term 4 in the Co-op program of the Faculty of Business Administration. It is not necessarily intended for the student with the highest academic average but rather a student who combines scholarship standing and leadership ability. It will be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid on the basis of a recommendation from the Dean, Faculty of Business Administration. While financial need is not to be considered a major criterion, it can be used as a deciding factor in the case of students who may otherwise be equally qualified in a given year.

**INTERNATIONAL PERSONNEL MANAGEMENT ASSOCIATION AWARD**

A \$350.00 award will be presented annually to an outstanding student in the undergraduate course, Advanced Personnel Management. The recipient will be recommended by the Scholarship Advisory Committee of the Faculty of Business Administration acting upon the advice of the course instructor. Scholastic abilities, financial need and class participation will be the basis upon which the award will be made. The recipient of the award will also be eligible for one year's free membership in the local Chapter of IPMA-Canada.

**THE RON JOYCE FOUNDATION SCHOLARSHIPS**

These scholarships are the result of a generous endowment to Memorial University of Newfoundland by the Ron Joyce Foundation. Interest on the fund will provide scholarships to full-time undergraduate students entering Memorial University of Newfoundland's Faculty of Business Administration who are Canadian citizens with scholarship standing and demonstrated financial need. These scholarships

will be valued at two semester's tuition for five courses (30 credit hours) and are renewable for up to four years (3 years plus original) provided the candidates maintain first class and scholarship standing. The scholarships will be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid upon recommendation of the Dean, Faculty of Business Administration.

#### **THE A. BRUCE LEMESSURIER SCHOLARSHIP FOR ENTREPRENEURSHIP**

This scholarship, valued at a portion of the income on the investment, was established by Sally Lou LeMessurier in memory of her husband A. Bruce LeMessurier. It will be awarded to a student beyond first year in an undergraduate Business program who has demonstrated interest in small business and entrepreneurship through completion of course work, and involvement in volunteer activities in the university and the community related to entrepreneurship. This scholarship will be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid on the basis of scholarship standing and a recommendation from the Dean, Faculty of Business Administration.

#### **MOLSON BREWERIES SCHOLARSHIPS**

Two scholarships, valued at \$1000.00 each, will be awarded to Newfoundland students entering the Faculty of Business Administration from first year university. The scholarships will be based on academic merit and will be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid on the recommendation of the Dean, Faculty of Business Administration.

#### **MOLSON BREWERIES SCHOLARSHIPS**

Two scholarships of \$500.00 each are to be awarded to Newfoundland students commencing Term 5 and Term 6 respectively of the Business Administration program. Scholarship standing as well as financial need will be taken into consideration in selecting candidates. The scholarships are awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid on the recommendation of the Dean, Faculty of Business Administration.

#### **MR. SUB SCHOLARSHIP**

This scholarship valued at \$500.00 annually, will be awarded to a student in the Faculty of Business Administration on the basis of scholarship standing and community involvement. It will be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid on the recommendation of the Dean, Faculty of Business Administration.

#### **THE JOHN J. MURPHY SCHOLARSHIP IN BUSINESS ADMINISTRATION**

This scholarship, valued at \$500.00, is awarded annually to a student who has achieved academic excellence upon completion of the first year (Terms 1 and 2) of the Business Administration program. The award, however, is not necessarily intended for the student who has received the highest average in this category. It is awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid upon the recommendation of the Dean, Faculty of Business Administration.

#### **THE NEWFOUNDLAND AND LABRADOR HYDRO CORPORATION SCHOLARSHIPS IN BUSINESS ADMINISTRATION**

These scholarships, offered annually by the Newfoundland and Labrador Hydro Corporation, are valued at \$1000.00 each. They are tenable in the Faculty of Business Administration at Memorial University of Newfoundland and are distributed as follows:

- Two to students entering Term 7
- Two to students entering Term 6
- One to a student entering Term 5

The scholarships will be awarded on the basis of academic excellence, taking into consideration such factors as financial need and character. The awards will be made by the Senate Committee on Undergraduate Scholarships and Financial Aid, acting on the recommendation of the Dean, Faculty of Business Administration.

#### **THE PMI JAMIE MORRY MEMORIAL SCHOLARSHIP**

This scholarship, valued at \$500.00, was established by the Project Management Institute in memory of Jamie Morry to acknowledge his commitment to the discipline of project management. The scholarship is open to undergraduate students of scholarship standing enrolled in Business Administration, doing a concentration in Management Information Systems (MIS) or Management Science who have demonstrated an interest in project management. In order to be considered for this scholarship, students must be nominated by a faculty member in the Faculty of Business Administration. It will be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid upon recommendation by the Dean, Faculty of Business Administration.

#### **THE RBC INVESTMENTS SCHOLARSHIP**

This scholarship, in memory of Maxwell J. Pratt, has a value of \$1,000.00 and is open to a student entering Term 7 of the Business Administration program who is majoring in the area of Finance. Selection of the successful candidate will be based on academic merit and the scholarship will be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid on the recommendation of the Dean, Faculty of Business Administration.

#### **THE SOCIETY OF MANAGEMENT ACCOUNTANTS OF NEWFOUNDLAND AWARD**

The Society of Management Accountants of Newfoundland offers annual awards to full-time students concentrating in accounting who have completed or are presently completing Business 7160 Advanced Topics in Managerial Accounting. Candidates must be pursuing a career in management accounting by writing the Society's examinations in the year they graduate. Selection will be based on the students' character, financial need and clear academic standing as defined by the university. These awards will be made by the Senate Committee on Undergraduate Scholarships and Financial Aid upon a recommendation from the Dean, Faculty of Business Administration.

#### **THE SOCIETY OF MANAGEMENT ACCOUNTANTS OF NEWFOUNDLAND SCHOLARSHIP**

The Society of Management Accountants of Newfoundland offers annual scholarships with a value of \$1,000 each to full-time students concentrating in accounting who have completed or are presently completing Business 7160 Advanced Topics in Managerial Accounting. Candidates must be pursuing a career in management accounting by writing the Society's examinations in the year they graduate. Selection will be based on the students' character, financial need and scholarship standing. These scholarships will be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid upon a recommendation from the Dean, Faculty of Business Administration.

#### **THE JAMES P. STEINHAEUER MEMORIAL SCHOLARSHIP IN SMALL BUSINESS AND ENTREPRENEURSHIP**

This scholarship is awarded out of income from a bequest by Mrs. S. Louise Steinhauer made in memory of her husband James and her son James, both prominent St. John's entrepreneurs. The scholarship will be awarded to a student in Term 5 of the commerce program who is completing a concentration in Small Business/Entrepreneurship. It will be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid on the basis of scholarship standing and a recommendation of the Dean, Faculty of Business Administration.

#### **THE SUN LIFE FINANCIAL SCHOLARSHIP IN APPLICATIONS OF TECHNOLOGY**

The Sun Life Financial Scholarship in Applications of Technology is consistent with the company's belief that education is key to the future well-being of individuals, business and society. The scholarship, valued at the annual interest on the endowment, will be designated on an annually rotating basis to a student on the Corner Brook campus and the St. John's campus. It will be awarded to a student within the faculties of Science, Engineering and Applied Science and Business Administration who is focussing his/her studies

on the application of technology and has demonstrated scholarship standing. In addition, the student will have actively participated in extra-curricular activities and have been active in student life. The scholarship will be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid on the recommendation of the appropriate Dean and/or the Principal of Sir Wilfred Grenfell College.

#### **THE TOROMONT SCHOLARSHIP**

This scholarship, valued at the annual interest on the endowment, has been established by Toromont Industries Ltd. as part of the *Opportunity Fund Campaign*. It will be awarded on an annually rotating basis between students in Business Administration and Engineering and Applied Science. It will be awarded on the basis of scholarship standing, extracurricular activities, and need. It will be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid upon recommendation from the Dean of the appropriate discipline.

#### **THE RALPH VINCENT MEMORIAL BUSINESS SCHOLARSHIP**

The scholarship is valued at \$5,000, and is provided via a contribution to Memorial University of Newfoundland by Mr. Darryl Fry. It will be awarded on the basis of scholarship standing and need to residents of Newfoundland and Labrador enrolled in first year Business Administration at Memorial University of Newfoundland. It will be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid based on a recommendation from the Dean, Faculty of Business Administration.

#### **THE JAMES J. WALSH MEMORIAL SCHOLARSHIPS**

Two undergraduate scholarships, established by the Walsh family to commemorate the memory of a dear husband and father, James J. Walsh, are tenable at Memorial University of Newfoundland and are valued at \$500.00 each. One scholarship will be tenable in the Faculty of Business Administration to a physically handicapped student. If no physically handicapped student is available, the award will be open to any student enrolled in the Faculty provided that the student is in good academic standing and demonstrates financial need. This scholarship will be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid, acting on the recommendation of the Dean, Faculty of Business Administration.

#### **THE ROBERT WESTCOTT MEMORIAL SCHOLARSHIP**

This scholarship was established by Mrs. Mary Westcott in memory of her late husband, Mr. Robert Westcott. It is valued at a portion of the annual interest on an endowment and will be awarded on a rotating basis to students beyond first year who have a strong commitment to post-secondary education and who are majoring in Business Administration and/or Economics. It will be based on scholarship standing and financial need and will be awarded to a student who was born in Newfoundland and Labrador. This scholarship will be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid upon the recommendation of the Dean/Department Head of the appropriate discipline.

#### **GEOFFREY H. WOOD FOUNDATION SCHOLARSHIP**

This scholarship, established by the Geoffrey H. Wood Foundation, is currently valued at \$2,500.00 and will be awarded annually to an undergraduate student in Term 4 or later in the Faculty of Business Administration who has consistently demonstrated academic excellence. The scholarship is non-renewable and is to be awarded with a maximum of one other concurrent award. The scholarship will be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid upon the recommendation of the Dean of Business Administration.

#### **THE WOOD GUNDY SCHOLARSHIP FOR UNDERGRADUATE BUSINESS STUDENTS**

The Wood Gundy Scholarship for Undergraduate Business Students will be awarded annually to a student of scholarship standing in Business Administration, who has demonstrated leadership ability through participation in student, faculty or University activities and/or contribution to the larger community. Preference will be given to students with a demonstrated career interest in the area of finance. The value of this scholarship will be determined by the annual income derived from the initial endowment. It will be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid upon recommendation of the Dean, Faculty of Business Administration.

#### **TOM WOODFORD AWARD FOR EXEMPLARY WORK TERMS**

This award was established through contributions to Memorial University of Newfoundland's *Opportunity Fund* by Tom Woodford. Two awards, valued at \$1,000.00 each, will be given annually: one award to a student who has completed work term 2, and the second award to a student who has completed work term 3 within the Bachelor of Commerce (Co-operative) Degree Program. In order to be considered for an award, an applicant must submit a Nomination Form completed by the applicant's employer for the work term for which the award is being sought. Recommendations will be based upon the nomination, the applicant's work report and the applicant's work performance. All submissions will be reviewed by members of Business Co-operative Education, and recommendations will be made to the Dean, Faculty of Business Administration. The award will be made by the Senate Committee on Undergraduate Scholarships and Financial Aid upon the recommendation of the Dean, Faculty of Business Administration.

### **3.4 Faculty of Education**

The following are available to students in the Faculty of Education based on a recommendation from the Dean.

#### **THE GORDON BILLARD AWARD IN EDUCATION**

A donation has been made to Memorial University of Newfoundland by Mr. Gordon Billard for the purpose of establishing a fund to provide financial assistance to Education students who live at the University's Harlow campus while undertaking approved studies in Great Britain. The award is intended to enhance the student's educational experience in Britain. Its value will be based on the annual interest on the fund. It will be awarded during the Spring semester by the Senate Committee on Undergraduate Scholarships and Financial Aid upon the recommendation of the Dean of Student Affairs and Services. Academic achievement and financial need will be considered.

#### **THE BRUTON SCHOLARSHIP FUND**

Dr. F.A. Bruton, friend and colleague of J.L. Paton, taught Nature Study to teachers in three successive Memorial University College summer schools, from 1926-28, at Paton's request. At his death in 1930, Dr. Bruton made a bequest to the College from which two Bruton Scholarships are awarded.

These scholarships, valued at \$500.00 each, are awarded annually to students who have demonstrated interest in Plant Biology. One award will be available to a student majoring in Biology whose special interest is in the field of Plant Biology. The second award will be available to an Education student whose main area of interest is in the teaching of science, in particular, plant biology. In the absence of a suitable candidate from the one department, two awards may be made by the other department in accordance with the above conditions. Academic ability and financial need will be taken into consideration in making these awards. They will be made by the Senate Committee on Undergraduate Scholarships and Financial Aid acting on the advice of the department concerned.

#### **THE WILLIAM J. FITZGERALD MEMORIAL BURSARY**

This Bursary was donated by Barbara C. FitzGerald in memory of her father, William J. FitzGerald (1897-1971) who was a St. John's businessman for many years. The award, valued at the annual interest on an endowment, is directed at a full time student in the Faculty of Education with first preference to students in the high school program who demonstrate scholarship standing and financial need. In the event that an eligible student in the high school program is not available in a given year, the Bursary will be awarded to a Bachelor of



Education student in one of the other programs as deemed appropriate by the Senate Committee on Undergraduate Scholarships and Financial Aid upon recommendation of the Dean, Faculty of Education.

#### **THE CARRIE E. HODDER MEMORIAL SCHOLARSHIP**

This scholarship, valued at the annual accrued interest on an initial endowment, has been established by the husband of the late Carrie E. Hodder as a tribute to her 36 year contribution to education as a teacher in the province of Newfoundland and Labrador. It will be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid upon the recommendation of the Dean, Faculty of Education on the basis of scholarship standing to students enrolled in Elementary Education.

#### **THE DR. ETHEL M. JANES MEMORIAL SCHOLARSHIP IN EDUCATION (UNDERGRADUATE)**

From a sum of money endowed to Memorial University of Newfoundland by the late Dr. Ethel M. Janes, one scholarship valued at \$2,000.00 will be awarded annually on the basis of scholastic achievement. Dr. Janes, a Professor of Education at Memorial University of Newfoundland for twenty-eight years, devoted most of her professional career to study, research and teaching in primary and elementary education. Her contribution to the development of primary and elementary teacher education program within the faculty was significant, as was her influence on primary and elementary education in the schools. Two generations of prospective teachers were her students.

This scholarship will be awarded upon completion of the second year of studies at Memorial University of Newfoundland to a student enrolled in the primary/elementary education program as a first degree. Instalments of \$1,000.00 each will be awarded in two successive academic terms; and the scholarship is renewable for two years provided first-class standing is maintained. This award will be made by the Senate Committee on Undergraduate Scholarships and Financial Aid on the recommendation of the Dean, Faculty of Education.

#### **THE GRACE LAYMAN SCHOLARSHIP IN EDUCATION**

This scholarship, valued at a minimum of \$1,000.00 is the gift of Professor Grace Layman who devoted her life to the development of educational drama in Newfoundland. It is awarded to a student from the Faculty of Education at Memorial University of Newfoundland who has demonstrated ability and interest in drama education. The award will be made by the Senate Committee on undergraduate Scholarships and Financial Aid on the recommendation of the Dean, Faculty of Education.

#### **THE EFFIE AND LEANDER MERCER SCHOLARSHIP**

The scholarship was established by Dr. Jean Mercer in honour of her parents, Effie and Leander Mercer. Valued at the annual interest on the endowment, an award will be made alternately to a third year student in Medicine, Engineering and Post-Secondary Education (formerly Vocational Education). In any given year, if no student is eligible in the designated faculty it may be awarded to a student in one of the other two faculties. The successful student must have done most of his/her studies as a mature student. It will be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid on the basis of scholarship standing and a recommendation of the respective Dean. Financial need must also be taken into account.

#### **THE A. BAXTER MORGAN MEMORIAL SCHOLARSHIP**

This scholarship has been established by Lorraine, spouse of the late Mr. Morgan. He began his career as a teacher after graduation from Memorial University College. Later, he operated his own business in Newfoundland until his retirement to Clarke's Beach. It will be valued at \$500.00 annually and will be awarded to a full-time student in the second year of the Faculty of Education program. This scholarship will be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid on the basis of scholarship standing and a recommendation from the Dean, Faculty of Education.

#### **THE JOHN M. AND ELSA S. MORGAN SCHOLARSHIPS**

These scholarships have been requested to the University by the late Dr. John M. Morgan, B.Sc., M.D., and have been named to commemorate Dr. Morgan and his wife Elsa. Up to twenty-five scholarships will be made available annually to undergraduate students who have completed at least one year of studies at Memorial University of Newfoundland within the areas specified below and who will be continuing in these programs. The scholarships, valued at a minimum of \$1,000.00 each, will be disbursed as follows:

- Five to the Faculty of Medicine
- Four to the School of Nursing
- Four to the Faculty of Education
- Four to the Department of Philosophy
- Four to the Department of Anthropology
- Two to the Department of Religious Studies (with preference to students of comparative religions)
- Two to students in Newfoundland Studies

The scholarships will be made on the basis of scholarship standing. Preference will be given, where possible, to students from the Port-de-Grave District.

#### **THE DR. M.O. AND GRACE MORGAN HARLOW BURSARY**

This bursary, valued at a portion of the annual accrued interest on an endowment to Memorial University of Newfoundland from the estate of Dr. and Mrs. Morgan, was established to encourage and assist undergraduate students to attend the University's Harlow Campus. It is open to full-time Memorial University of Newfoundland students attending the Harlow Campus. Up to three bursaries of equal value will be awarded annually to two students in the Faculty of Education (one each in the Spring and Fall semesters) and one to a student in any field of study (in the Winter semester). An application is required to identify those students planning to attend Harlow in the winter semester only and may be obtained from the Scholarships and Awards Office, Room 4018, University Centre. Bursaries awarded in fall and spring will be based on a recommendation from the Dean, Faculty of Education. These bursaries will be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid.

#### **THE NEWFOUNDLAND & LABRADOR TEACHERS' ASSOCIATION SCHOLARSHIP**

From a sum of money donated to the Anniversary Fund by the Newfoundland & Labrador Teachers' Association, a \$500.00 scholarship has been established at Memorial University of Newfoundland. This scholarship will be awarded annually on the basis of academic excellence and character to a senior student enrolled in the Faculty of Education. The award will be made by the Senate Committee on Undergraduate Scholarships and Financial Aid acting on the recommendation of the Dean of Education.

#### **THE MARY O'KEEFE MEMORIAL SCHOLARSHIPS**

These scholarships were established with a bequest from Mary O'Keefe. Valued at a portion of the annual interest on the endowment, they will be awarded to two full-time students entering the first year of a program in the Faculty of Education. These scholarships will be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid on the basis of scholarship standing and a recommendation from the Dean, Faculty of Education.

#### **THE DR. HUGH O'NEILL EDUCATION SCHOLARSHIP**

This scholarship is the result of a generous donation to Memorial University of Newfoundland by The O'Neill Foundation. One scholarship valued at \$2,500.00 will be awarded annually to a full-time undergraduate student in the Faculty of Education at Memorial University of Newfoundland. In awarding the scholarship, first preference will be given to a student from a third world country but in the event of no such eligible student in a given year the scholarship may be awarded to another education student. It will be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid on the basis of scholarship standing, financial need and a

recommendation from the Dean, Faculty of Education.

#### **THE DR. HERBERT LENCH POTTLE SCHOLARSHIP**

This scholarship has been established by the family of Dr. Pottle who served as a member of the Commission of Government (1947-49) and as the Minister of Public Welfare (1949-55) in the Government of Newfoundland. His career also included educational administration, magistrate, author and member of the first Board of Regents at Memorial University of Newfoundland. Valued at the annual interest on the endowment, this scholarship will be awarded to an undergraduate student in the Faculty of Education. Preference will be given to residents of Newfoundland and Labrador. The scholarship will be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid on the basis of scholarship standing and financial need and a recommendation from the Dean, Faculty of Education.

#### **THE DR. HERBERT LENCH POTTLE SCHOLARSHIP IN EDUCATION**

This scholarship has been established by Helen Louise Wesanko in memory of her father, Dr. Herbert Lench Pottle. Valued at a portion of the income on the investment, the scholarship will be awarded to an undergraduate student in the Faculty of Education with preference given to students who are entering the Faculty. The student must be a native-born Newfoundlander or a graduate of a Newfoundland High School. The scholarship will be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid on the basis of scholarship standing and a recommendation from the Dean, Faculty of Education.

#### **SCOTT MEMORIAL SCHOLARSHIP**

This scholarship, established by Winslow and Eileen Scott in memory of their late son Bradford, a former student of Memorial University of Newfoundland, is valued at not less than \$500.00. In awarding this scholarship, preference will be given to students in the Bachelor of Education Intermediate/Secondary Program who have completed the Bachelor of Physical Education or Bachelor of Physical Education (Co-operative) degree at Memorial University of Newfoundland. If a suitable candidate cannot be found in this category it will be awarded to a senior student in the Bachelor of Physical Education or Bachelor of Physical Education (Co-operative) program who is doing the teaching option. The scholarship will be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid on the basis of scholarship standing and upon a recommendation approved by the Dean, Faculty of Education and/or the Director, School of Human Kinetics and Recreation.

#### **RON AND GWEN SEARY MEMORIAL SCHOLARSHIP**

Two scholarships from the interest on a fund established by the family, colleagues and students of Ron and Gwen Seary shall be awarded. One scholarship shall be given to a student beyond second year who is majoring in English Language and Literature and who is recommended by the Head of the Department. One scholarship shall be awarded to a student in Primary/Elementary Education who shows promise in Art Education and who is recommended by the Dean, Faculty of Education.

#### **TRAVEL MANAGEMENT HARLOW SCHOLARSHIP**

This scholarship, valued at \$200.00 per semester, was established by Travel Management to assist Education students from Memorial University of Newfoundland who wish to pursue their studies at the Harlow Campus in Harlow England. It is available only to students in the Faculty of Education who attend the Harlow Campus and will be awarded on the basis of scholarship standing and need. It will be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid upon the recommendation of the Dean, Faculty of Education.

#### **TONY WALSH SCHOLARSHIP**

This scholarship has been established by donations from friends in memory of Tony Walsh, Teacher 1898-1994. Valued at a minimum of \$600.00 it will be awarded to a student who has completed first year and is continuing to second year in the Faculty of Education. The scholarship will be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid on the basis of scholarship standing with preference given to students who have demonstrated leadership, determination and dedication.

### **3.5 Faculty of Engineering and Applied Science**

The following are available to students in the Faculty of Engineering and Applied Science based on a recommendation from the Dean. For definition of scholarship standing for co-op students, see **Scholarships, Bursaries and Awards, General Information**,

#### **THE KAMAL AND HIRA AHUJA SCHOLARSHIP**

This scholarship has been established by Professor Hira Ahuja, a former faculty member in the Faculty of Engineering and Applied Science at Memorial University of Newfoundland. It is valued at \$1,000.00 and will be awarded annually to a student entering the Faculty of Engineering and Applied Science. The scholarship will be based on scholarship standing but in the event of a tie between two or more students, preference will be given, wherever possible, to a student who has done community work with the East Indian community in Newfoundland and Labrador. It will be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid on the basis of a recommendation from the Dean, Faculty of Engineering and Applied Science.

#### **THE AFSHIN ASSEMI MEMORIAL AWARD**

This Award has been established in memory of Afshin Assemi (Term 8 Electrical, 1991) and is valued at a portion of the income on the investment. It will be awarded during the Winter semester and is intended for students enrolled in Term 8 of the Faculty of Engineering and Applied Science Program. The criteria for selection will be on the basis of outstanding contribution to the betterment of student life within the Faculty of Engineering and Applied Science over the course of his/her academic career. It will be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid upon the recommendation of the Engineering Scholarship Committee which will accept recommendations from the Engineering Society Executive. The Engineering Society Executive should consult with Term 8 Class representatives before arriving at their decision. If it is decided that two candidates are equally deserving of the Award, then joint awards may be given at equal valued.

#### **THE ATLANTIC CANADA WATER WORKS ASSOCIATION AWARD FOR EXCELLENCE IN WATER ENGINEERING STUDIES**

This award has been established by the Atlantic Canada Water Works Association (ACWWA) and is valued at \$500.00 annually. It will be awarded to a Civil Engineering student in his/her final term who has shown excellence in water-related engineering studies. The successful candidate must have demonstrated excellence in the following subject areas; Fluid Mechanics, Hydraulics, Hydrology and Water Resources and Hydrotechnical Engineering. In addition, preference will be given to students who have completed and excelled in at least one work term related to water engineering. The scholarship will be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid on the basis of a recommendation from the Dean, Faculty of Engineering and Applied Science in consultation with the Discipline Chair of Civil Engineering.

#### **THE C.H. BALLAM SCHOLARSHIP**

This scholarship was established by the Honourable Charles H. and Mrs. Ballam as a memorial to their son Ulric, a former Engineering student at the University. The scholarship has a value of \$250.00. It is awarded annually during Term 2 on the recommendation of the Dean of Engineering and Applied Science. In making the award, academic achievement, character and financial need are taken into account. An application is required.

**THE E.F. BARNES SCHOLARSHIP**

This scholarship, valued at \$500.00, has been endowed by Stirling Kelloway in honour of the late Mr. E.F. Barnes, founder of E.F. Barnes Machine and Fabricating Shop Limited which built the first all steel vessel in Newfoundland and developed the only marine engine ever built in the Province.

The award will be made each year during the Fall semester to a student in Term 6, on the recommendation of the Dean of Engineering and Applied Science. The selection of the winner will be based on scholastic achievement in Academic Term 5. Financial need will be an additional consideration. This scholarship will not be awarded to a student who is already holding a scholarship during the same academic year.

**PAUL S. BATSTONE MEMORIAL SCHOLARSHIP**

This scholarship, valued at a portion of the annual interest, was established in memory of Paul S. Batstone who spent 20 years promoting co-operative education at Memorial University of Newfoundland and was a co-ordinator in the Faculty of Engineering and Applied Science until his death in 2003. Based on scholarship standing, it will be awarded to a senior student completing a spring work term who has demonstrated a high level of commitment to Engineering Co-operative Education and has made a significant contribution to their employer in the past work term. It is awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid on the recommendation of the Dean, Faculty of Engineering and Applied Science with a nomination from the student's employer and input from the Office of Co-operative Education.

**DR. S.M. BLAIR MEMORIAL ALUMNI AWARDS FOR EXCELLENCE IN ENGINEERING**

Two scholarships, established by the Memorial University of Newfoundland Alumni Association in memory of Dr. Sidney M. Blair, have a value of \$500.00 each and are awarded annually to students entering Term 3 of the Engineering program and Term 5 of the Civil Engineering program who have achieved an appropriate scholarship average in academic courses of the preceding terms. The awards are made by the Senate Committee on Undergraduate Scholarships and Financial Aid on the advice of the Dean of Engineering and Applied Science.

**THE WALLY J. CAMPBELL MEMORIAL SCHOLARSHIP**

This scholarship has been established in memory of Professor W. J. Campbell who helped establish the engineering program at Memorial University of Newfoundland and taught in the program until 1995 when he retired. The scholarship, one or more, is valued at a minimum of \$500.00 and will be awarded to a student entering term three who has completed all elements of the program prior to Term 3. Scholarship standing, leadership and contribution to student life will be considered in making the award. The scholarship will be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid on the basis of a recommendation from the Dean, Faculty of Engineering and Applied Science.

**THE CANADIAN INSTITUTE OF MINING, METALLURGY AND PETROLEUM (NEWFOUNDLAND BRANCH) GOLDEN JUBILEE SCHOLARSHIP**

This scholarship valued at a portion of the income on the investment, will be awarded to a student entering the final year of undergraduate studies at Memorial University of Newfoundland. Based on scholarship standing, the scholarship will be available to a student majoring in a field of study that is covered by the fields of interest of the Canadian Institute of Mining, Metallurgy and Petroleum specifically; Earth Sciences, Geophysics, Geography, Economics, Environmental Science, Engineering, Business and Commerce. Financial need may be taken into consideration. The scholarship will be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid.

**THE DR. S.J. CAREW MEMORIAL SCHOLARSHIPS**

These two scholarships, established in memory of Dr. S.J. Carew, each have a value of \$500.00, and are awarded annually to students entering Term 2 of the Engineering program. The awards are made by the Senate Committee on Undergraduate Scholarships and Financial Aid acting on the advice of the Dean of Engineering and Applied Science. Conditions of the award are as follows:

- a. Economic need will be the major consideration but at the same time candidates will be required to have scholarship standing, at least a fairly high "B" average in Term 1.
- b. The scholarships will not be awarded to candidates holding scholarships of equal or greater value.

**THE CHEVRON CANADA RESOURCES ENGINEERING SCHOLARSHIP**

This scholarship, valued at the interest on an endowment to the *Opportunity Fund* by Chevron Canada Resources, will be awarded annually on the basis of scholarship standing to a student entering term two of the Engineering program at Memorial University of Newfoundland. The scholarship is awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid, based on a recommendation from the Dean, Faculty of Engineering and Applied Science.

**STEPHEN CROOKS MEMORIAL SCHOLARSHIP**

This scholarship, valued at \$1000.00, has been established in memory of Stephen Crooks (Civil 1982-Memorial University of Newfoundland). It will be awarded to an Engineering student, on the basis of sound scholastic record, who has completed at least five academic terms in Engineering. The student's contribution to the Engineering Faculty and Applied Science and the University, performance during work terms, and overall perseverance within the program will also be taken into consideration. The award is made by the Senate Committee on Undergraduate Scholarships and Financial Aid on the recommendation of the Dean of Engineering and Applied Science.

**THE WILFRED AND ROSE DAVIS SCHOLARSHIP IN ENGINEERING**

This scholarship, a gift from Wilfred J. (Memorial University College 1946) and Rose Davis, is awarded annually to a student entering or engaged in the Engineering program. The award is valued at the interest earned annually from the endowment and will not be awarded to candidates holding other scholarships of greater value. This scholarship is based on scholarship standing and financial need. It will be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid upon recommendation from the Dean, Faculty of Engineering and Applied Science.

**DET NORSKE VERITAS SCHOLARSHIP**

The Det Norske Veritas Scholarship is donated by the Norwegian Ship Classification Society of that name. The \$500.00 scholarship is awarded to the student in the graduating class in Naval Architectural Engineering who has achieved the highest total marks in terms five to eight inclusive. The award is made solely on academic criteria, and may be held in addition to not more than one other award having monetary value. The award is made by the Senate Committee on Undergraduate Scholarships and Financial Aid on the recommendation of the Dean of Engineering and Applied Science.

**THE J.M.C. FACEY ENGINEERING SCHOLARSHIP**

The scholarship is valued at \$5,000, and is provided via a contribution to Memorial University of Newfoundland by Mr. Darryl Fry. It will be awarded on the basis of scholarship standing and need to residents of Newfoundland and Labrador enrolled in first year Engineering at Memorial University of Newfoundland. It will be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid based on a recommendation from the Dean, Faculty of Engineering and Applied Science.

**FISHERY PRODUCTS INTERNATIONAL LTD. UNDERGRADUATE SCHOLARSHIPS**

Fishery Products International Ltd. offers annually two scholarships valued at \$1000.00 each tenable at Memorial University of Newfoundland. One scholarship is available to a student in the Faculty of Engineering and Applied Science and the second one to a student in the Faculty of Business Administration. In order to qualify candidates must be enrolled in term 1 of the respective programs and be of scholarship standing. Preference will be given to dependants of employees of Fishery Products International Limited who must complete a special application which may be obtained from: Head Office, Fishery Products International Ltd., 70 O'Leary Avenue, P. O. Box 550, St. John's, NL, A1C 5L1. If there are no suitable candidates in this category the scholarships will be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid based on a recommendation from the dean of the appropriate academic unit.

**DANIEL FREEMAN MEMORIAL SCHOLARSHIP**

This scholarship was established from the contributions of many family members, friends, and fellow students in memory of Danny Freeman, a former Engineering student at Memorial University of Newfoundland. The scholarship, valued at a portion of the accrued interest, will be awarded annually, on a rotating basis, to students enrolled in either Engineering or Mathematics. Preference will be given to candidates with disabilities with consideration given to quality of character and overall perseverance. If a successful candidate is not recommended by the discipline on rotation in a given year an eligible student from the other discipline may be awarded the scholarship for that year. If no candidates are available from the first group any student enrolled in either Engineering or Mathematics (discipline to be determined by the rotation schedule in a given year) will be considered. This scholarship will be awarded by the Senate Committee on Undergraduate Scholarships and financial Aid on the recommendation of the Dean, Faculty of Engineering or the Head, Department of Mathematics and Statistics.

**THE GENERAL MOTORS SCHOLARSHIP FOR WOMEN IN ENGINEERING**

This scholarship is one of several established by General Motors of Canada Limited with contributions to the University's *Opportunity Fund* Campaign. Interest from the fund will provide a scholarship valued at a minimum of \$1,000.00 annually to support and encourage more women to study and work in Engineering, thereby increasing the contributions of women to engineering and scientific endeavours. This scholarship is tenable at Memorial University of Newfoundland to female students regardless of age, with preference to those who are entering the Faculty of Engineering and Applied Science. However, female students already enrolled in Engineering studies may be eligible if in a given year an eligible entering student is not available. The scholarship will be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid on the basis of scholarship standing and a recommendation from the Dean, Faculty of Engineering and Applied Science.

**THE GENERAL MOTORS SCHOLARSHIP IN ENGINEERING**

This scholarship was established by General Motors of Canada Limited with contributions to the University's *Opportunity Fund* Campaign. Interest from the fund will provide a scholarship valued at a minimum of \$1,000.00 annually to support individuals who are first generation students in a family (immediate family) to enroll in Engineering. It will be awarded to a student in any term of the Bachelor of Engineering program at Memorial University of Newfoundland. It will be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid on the basis of scholarship standing and a recommendation from the Dean, Faculty of Engineering and Applied Science.

**THE JOHN P. GREENE SCHOLARSHIP**

This scholarship is funded by Mrs. Amelia Greene to honour her late husband, John P. Greene, a retired engineering instructor at the Fisheries and Marine Institute. The scholarship is awarded to a full-time undergraduate student in the Ocean and Naval Architectural program in the Bachelor of Engineering Degree. It will be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid on the basis of scholarship standing and a recommendation from the Dean, Faculty of Engineering and Applied Sciences.

**THE HALLIBURTON ENERGY SERVICES SCHOLARSHIP IN MECHANICAL ENGINEERING**

This fund, a gift to Memorial University of Newfoundland by Halliburton Energy Services via *The Opportunity Fund* campaign, will provide a scholarship valued at approximately \$1,500.00 annually. It will be awarded on the basis of scholarship standing to a student in academic terms 5 or 6 of the Mechanical Engineering Program at Memorial University of Newfoundland. The scholarship will be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid on the recommendation of the Dean, Faculty of Engineering and Applied Science.

**HIBERNIA SCHOLARSHIPS**

These scholarships, established by the Hibernia Management and Development Company Ltd. and tenable at Memorial University of Newfoundland, are valued at approximately \$1,000.00 each and awarded annually as follows:

- 2 to students entering Term 3 of the Faculty of Engineering and Applied Science
- 2 to students entering Term 3 of the Faculty of Business Administration

Each year one scholarship will be awarded to a male and one to a female in each of the above disciplines. Candidates for these awards must be of scholarship standing but consideration may also be given to their financial circumstances. All candidates must be residents of Newfoundland and Labrador (a person who has maintained permanent residence in the province for a period of 12 months immediately prior to enrollment for the term of study). The awards will be made by the Senate Committee on Undergraduate Scholarships and Financial Aid on the recommendation of the Deans, Faculty of Business Administration and Faculty of Engineering and Applied Science.

**THE HONEYWELL LIMITED-HONEYWELL LIMITÉE SCHOLARSHIP**

This scholarship, the gift of Honeywell Limited-Honeywell Limitée, is valued at the annual interest on the initial endowment. It will be awarded on the basis of scholarship standing to a student in Term 5 of the Mechanical Engineering Program at Memorial University of Newfoundland. The scholarship will be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid on the recommendation of the Dean, Faculty of Engineering and Applied Science.

**THE IEEE NEWFOUNDLAND AND LABRADOR SECTION TERM 4 SCHOLARSHIP**

This scholarship was established by an endowment from the Newfoundland and Labrador Section of IEEE (The Institute of Electrical and Electronics Engineers). It is valued at a portion of the annual interest accrued on the initial endowment and awarded annually to a full-time undergraduate student in Term 4 of the Electrical and Computer Engineering or Computer Engineering Programs at Memorial University of Newfoundland. The recipient must be an active student member of IEEE and be of scholarship standing as defined by the University. In addition to the student's academic achievement, contributions to the IEEE student branch will be considered. In this regard, candidates must submit a one page letter describing their IEEE involvement, their professional goals and their student activities in the areas of electrical and computer and/or computer engineering. A student may not hold the scholarship more than once. This scholarship will be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid upon recommendation of the Dean, Faculty of Engineering and Applied Science, acting on the advice of a special selection committee of the IEEE, Newfoundland and Labrador Section.

**THE IEEE SCHOLARSHIP**

This scholarship was established by the members of the Newfoundland and Labrador section of IEEE (The Institute of Electrical and Electronics Engineers). This Scholarship has a value of \$1000. It is awarded annually to a full-time undergraduate student in Term 6 of the Electrical and Computer Engineering Program at Memorial University of Newfoundland. The recipient must be a student member of

IEEE and possess scholarship standing as defined by the University. In addition to the student's academic achievement, contributions to the IEEE student branch will be considered. This Scholarship will be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid upon recommendation of the Dean, Faculty of Engineering and Applied Science, acting on the advice of the IEEE Newfoundland and Labrador Section.

#### **THE ITT FLYGT SCHOLARSHIP IN ENGINEERING**

This scholarship is provided by a donation of \$7,500.00 from ITT Flygt. It is valued at \$2,500.00 annually and will be provided to Memorial University of Newfoundland for a three (3) year period. It will be awarded on the basis of scholarship standing to undergraduate students enrolled in any year of the Engineering program at Memorial University of Newfoundland studying Civil, Electrical or Mechanical Engineering. The scholarship will be awarded on a yearly basis by the Senate Committee on Undergraduate Scholarships and Financial Aid based on a recommendation from the Dean, Faculty of Engineering and Applied Science.

#### **THE KIEWIT OFFSHORE SERVICES AWARD**

These awards, valued at \$1000 each for two students are offered annually by Kiewit Offshore Services (KOS). Each award also includes the possibility for the recipient to complete one or more work terms with this well-renowned general contracting company. The eligible candidates should have completed, as a minimum, their Term 4 in Naval, Civil, Mechanical or Electrical Engineering with good scholarship standing and have demonstrated a strong interest to work in the construction industry during their previous work terms, preferably with the Kiewit Group. Factors to be taken into account include character qualities, team spirit, personal initiative, leadership, reliability and mobility. Financial need may also be a consideration. This scholarship will be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid upon the recommendation of the Dean, Faculty of Engineering and Applied Sciences with the appropriate input from the Chairpersons and Faculty acting on the advice of a special selection committee of the Kiewit Group.

#### **THE PETER KIEWIT SONS CO. LTD. AWARD**

These awards, valued at \$1000 each for two students are offered annually by Peter Kiewit Sons Co. (PKS). Each award also includes the possibility for the recipient to complete one or more work terms with this well-renowned general contracting company. The eligible candidates should have completed, as a minimum, their Term 4 in Civil, Mechanical or Electrical Engineering with good scholarship standing and have demonstrated a strong interest to work in the construction industry during their previous work terms, preferably with the Kiewit Group. Factors to be taken into account include character qualities, team spirit, personal initiative, leadership, reliability and mobility. Financial need may also be a consideration. This scholarship will be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid upon the recommendation of the Dean, Faculty of Engineering and Applied Sciences with the appropriate input from the Chairpersons and Faculty acting on the advice of a special selection committee of the Kiewit Group.

#### **THE GENE H. KRUGER MEMORIAL SCHOLARSHIP**

These scholarships are the result of a generous donation by Joseph Kruger II in memory of his father, Gene H. Kruger. Valued at a portion of the income on the investment, they will be awarded to two students in the Faculty of Engineering and Applied Science who were born and have lived in Newfoundland all of their life. Particular emphasis should be given to those who are studying Mechanical and Electrical Engineering as well as those studying information technologies. The scholarships will be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid on the basis of scholarship standing and financial need on the recommendation of the Dean, Faculty of Engineering and Applied Science.

#### **THE WALLACE ALLISON MACCALLUM MEMORIAL SCHOLARSHIP**

This scholarship valued at the annual interest, was established by the MacCallum family in honour of their father, Wallace. It will be awarded to a third or fourth year Engineering student at Memorial University of Newfoundland. It will be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid on the basis of scholarship standing and a recommendation from the Dean, Faculty of Engineering and Applied Science. Factors such as, interest in the humanities and international affairs, marine technology, contribution to his/her engineering class, and athletic involvement may also be taken into consideration.

#### **THE JOHN MADVIG BURSARY**

This bursary will be awarded annually to a student in the Faculty of Engineering and Applied Science who is studying in the Naval Architectural Engineering program at Memorial University of Newfoundland. The value of the bursary will be based on the annual interest earned on the initial endowment. It will be awarded to a Canadian citizen on the basis of academic standing and financial need. The bursary will be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid upon recommendation of the Dean of Engineering and Applied Science.

#### **THE EFFIE AND LEANDER MERCER SCHOLARSHIP**

The scholarship was established by Dr. Jean Mercer in honour of her parents, Effie and Leander Mercer. Valued at the annual interest on the endowment, an award will be made alternately to a third year student in Medicine, Engineering and Post-Secondary Education (formerly Vocational Education). In any given year, if no student is eligible in the designated faculty it may be awarded to a student in one of the other two faculties. The successful student must have done most of his/her studies as a mature student. It will be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid on the basis of scholarship standing and a recommendation of the respective Dean. Financial need must also be taken into account.

#### **NACE INTERNATIONAL (ATLANTIC CANADA SECTION) PRIZE**

This prize has been established by the National Association of Corrosion Engineers and is valued initially at \$300.00 annually. It will be awarded to an Electrical or Mechanical Engineering student in Academic Term 5 in the engineering program at Memorial University of Newfoundland. The successful candidate must have demonstrated excellence in Engineering 2205 - Chemistry and Physics of Engineering Materials I. In addition, preference will be given to students who have completed and excelled in at least one work term related to corrosion engineering or has carried out a laboratory experiment or has performed research in corrosion and/or corrosion mitigation. The prize will be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid on the basis of a recommendation from the Dean, Faculty of Engineering and Applied Science in consultation with the Atlantic Canada Section of NACE International. The successful candidate will be encouraged to join NACE International as a student member to encourage his or her interest in corrosion mitigation.

#### **THE NEWFOUNDLAND AND LABRADOR HYDRO CORPORATION SCHOLARSHIPS IN ENGINEERING AND APPLIED SCIENCE**

Five scholarships are offered annually by the Newfoundland and Labrador Hydro Corporation and are valued at \$1,000.00 each. They are distributed as follows:

- Two to students enrolled in Term 1 based on previous scholastic achievement
- Two to students enrolled in Term 2 based on Term 1 Engineering results
- One to a student enrolled in Term 8 based on the cumulative average in Engineering.

The Scholarships will be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid upon the recommendation of the Dean of Engineering and Applied Science. Need may be considered. The awards will not be made to students who hold other concurrent scholarships of significant value.

#### **THE NEWFOUNDLAND AND LABRADOR FEDERATION OF MUNICIPALITIES CIVIL ENGINEERING SCHOLARSHIP**

This scholarship, the gift of the Newfoundland and Labrador Federation of Municipalities, is valued at \$500.00. It will be awarded

annually to a Civil Engineering student at Memorial University of Newfoundland. Financial need and other factors may also be taken into account. It will be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid on the basis of scholarship standing and a recommendation from the Dean, Faculty of Engineering and Applied Science.

#### **THE NEWFOUNDLAND DESIGN ASSOCIATES LIMITED SCHOLARSHIP IN ENGINEERING**

This fund donated to Memorial University of Newfoundland via *The Opportunity Fund* by Newfoundland Design Associates Limited, will provide a scholarship for a full time undergraduate student in academic Term 2 of the Engineering Program. The scholarship, valued at the annual interest on the initial endowment, is based on scholarship standing and will be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid upon recommendation of the Dean, Faculty of Engineering and Applied Science.

#### **THE NEWFOUNDLAND ROAD BUILDERS/HEAVY CIVIL ASSOCIATION SCHOLARSHIP**

This scholarship has been established by the Newfoundland and Labrador Road Builders/Heavy Civil Association and is valued at \$1,000.00 annually. It will be awarded to a Civil Engineering student who has achieved scholarship standing and is in Term 6 of their program. The scholarship will be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid on the basis of a recommendation from the Dean, Faculty of Engineering and Applied Science.

#### **THE NORANDA SCHOLARSHIP**

This scholarship valued at the annual interest, has been established by the Noranda Foundation as part of the Opportunity Fund campaign. It will be awarded on an annually rotating basis between students in Earth Sciences and Engineering and Applied Science. It will be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid on the basis of scholarship standing and a recommendation from the Dean/ Department Head of the appropriate discipline.

#### **THE WILLIAM O'REILLY MEMORIAL SCHOLARSHIP**

This scholarship established in memory of William O'Reilly (Engineering Class '76), has a value of \$500.00, and is awarded annually to a student in Term 5 or Term 8 of the Engineering program. The award is made by the Senate Committee on Undergraduate Scholarships and Financial Aid, on the recommendation of the Dean of Engineering and Applied Science in consultation with a representative of the Engineering Class of '76. Economic need will be the major consideration but the candidate will be required to have at least a "B" average in the previous semester. The scholarship will not be awarded to a candidate holding a scholarship of equal or greater value.

#### **THE DR. DOUGLAS G. PINCOCK SCHOLARSHIP IN ELECTRICAL ENGINEERING**

This scholarship has been established in honour of Dr. Douglas Pincock of AMIRIX Systems. It is valued at \$2500 annually and will be awarded to an Electrical Engineering student in Term 5 of the Faculty of Engineering and Applied Science at Memorial University of Newfoundland. The recipient of this scholarship will have demonstrated scholarship standing as well as extra-curricular involvement in any of the following areas: athletics, fine arts, student body activities and/or volunteer work. The scholarship will be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid upon the recommendation of the Dean, Faculty of Engineering and Applied Science.

#### **FRITZ POTTER MEMORIAL AWARD**

This award has been established in memory of Fritz Potter (Civil Engineering Graduate, 1991) and is valued at \$500.00. It will be awarded during the Winter semester and is intended for students enrolled in Term 8 of the Civil Engineering program. The criteria for selection will be on the basis of outstanding contribution to the spirit of the Civil Engineering graduating class over the course of their studies at Memorial University of Newfoundland. It will be administered by the Engineering Scholarship Committee which will accept recommendations from the Engineering Society Executive. The Engineering Society Executive should consult with Term 8 Civil Engineering class before arriving at their decision. If it is decided that two candidates are equally deserving of the award, then joint awards may be given valued at \$250.00 each. This award will be made by the Senate Committee on Undergraduate Scholarships and Financial Aid based upon a recommendation from the Faculty of Engineering.

#### **THE PROFESSIONAL ENGINEERS AND GEOSCIENTISTS NEWFOUNDLAND AND LABRADOR ENGINEERING SCHOLARSHIPS**

Two scholarships, the gifts of the Professional Engineers and Geoscientists Newfoundland and Labrador, are awarded annually to students entering the Engineering program. The awards are valued at \$1,000.00 each and will not be awarded to candidates holding other scholarships of greater value. One of the scholarships will be awarded on the basis of scholastic achievement and financial need; the other primarily on the basis of scholastic achievement. These scholarships will be awarded by a committee of the Professional Engineers and Geoscientists Newfoundland and Labrador. Further information regarding application forms, etc., is available from the Dean of Engineering and Applied Science.

#### **THE PROFESSIONAL ENGINEERS AND GEOSCIENTISTS OF NEWFOUNDLAND AND LABRADOR PAST PRESIDENT'S ENGINEERING SCHOLARSHIP**

This scholarship, valued at a minimum of \$1,000.00, was established by the Professional Engineers and Geoscientists Newfoundland and Labrador to mark the centennial year of Engineering as an organized profession in Canada. It is awarded annually on the basis of scholastic achievement to a student entering Term One of the Engineering program at Memorial University of Newfoundland. The scholarship is awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid, in consultation with the Dean of Engineering and PEGNL.

#### **THE QUADRATEC INC. SCHOLARSHIP**

This fund, donated to Memorial University of Newfoundland via *The Opportunity Fund* by Quadratec Inc., will provide a scholarship for a full-time undergraduate student in Academic Term 4 of the Engineering Program in either the Electrical and Computer or the Mechanical Engineering disciplines. The scholarship, valued at the annual interest on the endowment, is based on scholarship standing and will be awarded by the Senate Committee on Undergraduate Scholarships upon recommendation of the Dean, Faculty of Engineering and Applied Science.

#### **RUTTER ENGINEERING AND AUTOMATION INC. SCHOLARSHIP IN ENGINEERING**

This scholarship, valued at the annual interest on the endowment, will be awarded annually to a student in Term 4 of the Electrical Engineering program at Memorial University of Newfoundland. Candidates for this scholarship must be of scholarship standing but consideration may also be given to their financial circumstances. All candidates must be residents of Newfoundland and Labrador (a person who has maintained permanent residence in the province for a period of 12 months immediately prior to enrollment for the term of study). The scholarship will be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid on the recommendation of the Dean, Faculty of Engineering and Applied Science.

#### **THE SANDWELL ENGINEERING INC. SCHOLARSHIP**

This scholarship, valued at the annual interest on their initial endowment, was established by Sandwell Engineering Inc. and is awarded annually to a student in Term 2 of the Bachelor of Engineering program at Memorial University of Newfoundland. It will be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid on the basis of scholarship standing and a recommendation from the Dean, Faculty of Engineering and Applied Science.

#### **THE SCHLUMBERGER CANADA LIMITED SCHOLARSHIPS**

These scholarships, 15 valued at \$1,000.00 each annually are funded by Schlumberger Canada Limited and are available to the Faculty of Engineering and Applied Science. They will target students in academic terms two (2) through eight (8) of the Faculty with two

scholarships being allocated to each of terms two through seven and three for term eight. The scholarships will be awarded on the basis of scholarship standing and a cumulative average of 75% or higher, to residents of Newfoundland and Labrador (a person who has maintained permanent residence in the province for a minimum of twelve months immediately prior to entering academic term one of the program). Where possible the scholarships shall be divided proportionally between male and female students based on male and female enrollment and subject to compliance to the above criteria. The scholarships will be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid upon the recommendation of the Dean, Faculty of Engineering and Applied Science.

#### **THE SGE GROUP INC. SCHOLARSHIP**

This scholarship, valued at \$1,200.00, is awarded annually to a student in Term 2 of the Bachelor of Engineering program at Memorial University of Newfoundland who meets the requirements for scholarship standing. It will be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid upon recommendation of the Dean, Faculty of Engineering and Applied Science.

#### **THE SHELL CANADA ENGINEERING SCHOLARSHIP**

This fund a gift to Memorial University of Newfoundland by Shell Canada via *The Opportunity Fund* campaign, will provide three scholarships valued at approximately \$1,500.00 each annually. They will be awarded on the basis of scholarship standing to students in academic terms 5, 6, 7 or 8 of the Mechanical Engineering Program at Memorial University of Newfoundland. The scholarships will be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid on the recommendation of the Dean, Faculty of Engineering and Applied Science.

#### **STRUCTURAL DESIGN INC. SCHOLARSHIP IN ENGINEERING**

This scholarship is the result of a commitment to *The Opportunity Fund* by Structural Design Inc. It will provide one scholarship of \$500 to full-time students in Term 7 specializing in Structural Engineering. The scholarship, based on scholarship standing, will be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid upon recommendation of the Dean, Faculty of Engineering and Applied Science. In the case of a tie between two students, need may be a determining factor.

#### **THE SUN LIFE FINANCIAL SCHOLARSHIP IN APPLICATIONS OF TECHNOLOGY**

The Sun Life Financial Scholarship in Applications of Technology is consistent with the company's belief that education is key to the future well-being of individuals, business and society. The scholarship, valued at the annual interest on the endowment, will be designated on an annually rotating basis to a student on the Corner Brook campus and the St. John's campus. It will be awarded to a student within the faculties of Science, Engineering and Applied Science and Business Administration who is focussing his/her studies on the application of technology and has demonstrated scholarship standing. In addition, the student will have actively participated in extra-curricular activities and have been active in student life. The scholarship will be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid on the recommendation of the appropriate Dean and/or the Principal of Sir Wilfred Grenfell College.

#### **THE SUN MICROSYSTEMS OF CANADA SCHOLARSHIP**

This fund, donated to Memorial University of Newfoundland via *The Opportunity Fund* by Sun Microsystems of Canada, will provide a scholarship for a full-time undergraduate student in Academic Term 5 of the Computer Engineering program. The scholarship, valued at the annual interest on the endowment, is based on scholarship standing and will be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid upon recommendation of the Dean, Faculty of Engineering and Applied Science.

#### **THE DAVID S. TEMPLETON SCHOLARSHIP**

This scholarship is the gift of Newfoundland Power Inc. The exact value is reviewed on an annual basis and is currently set at \$2,000.00. It is awarded annually to a student entering Term 4 who has completed all components of the program up to Term 4. Academic excellence is a major criterion but should be coupled with exemplary work term results. In addition, the candidate should have strong interpersonal and communications skills as well as good understanding of the needs and aspirations of their fellow citizens and a desire to use engineering as a vehicle to make our world a better place. The scholarship is awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid, on the recommendation of the Dean, Faculty of Engineering and Applied Science in consultation with the President of the Company. No application is required.

#### **TERM 1 ENTRY SCHOLARSHIPS IN ENGINEERING**

These scholarships are endowed by Mr. Wing Soon Oue of Seven Seas Restaurant, Corner Brook, and have a value of up to \$500.00 each. They are awarded annually to two students entering the Engineering program, providing they hold no other awards of greater value. The scholarships will be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid acting on the recommendation of the Dean of Engineering and Applied Science.

#### **THE CHARLES O. THOMAS SCHOLARSHIP**

This scholarship is a gift of The Thomas Fuller Construction Company (1958) Limited, in memory of Mr. Charles O. Thomas, who was supervisor of construction of the National Research Council Institute for Marine Dynamics on this campus, 1982-85. The value of the award will be based upon the interest accrued on the principal sum donated, up to the amount of \$750.00. The award is made to the student in the Faculty of Engineering and Applied Science who obtains the highest overall average in Terms 3, 4, and 5 and who does not already hold a scholarship administered by the Senate Committee on Undergraduate Scholarships and Financial Aid in that same academic year. The award is made by the Senate Committee on Undergraduate Scholarships and Financial Aid, on the recommendation of the Dean of Engineering and Applied Science.

#### **THE TOROMONT SCHOLARSHIP**

This scholarship, valued at the annual interest on the endowment, has been established by Toromont Industries Ltd. as part of the *Opportunity Fund Campaign*. It will be awarded on an annually rotating basis between students in Business Administration and Engineering and Applied Science. It will be awarded on the basis of scholarship standing, extracurricular activities, and need. It will be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid upon recommendation from the Dean of the appropriate discipline.

#### **JACQUES WHITFORD LTD. SCHOLARSHIP**

This scholarship, valued at \$2,000 annually, has been established by Jacques Whitford Limited. Based on scholarship standing it will be awarded, on an annually rotating basis, to students who have just completed Term 2 or Term 5 in the Faculty of Engineering and Applied Science and students beyond second year in the Faculty of Science. This scholarship also includes one work term/summer employment with the company. The scholarship will be awarded at the end of the winter semester for the coming spring/summer by the Senate Committee on Undergraduate Scholarships and Financial Aid based on a recommendation from the Dean of the Faculty on rotation in consultation with the company.

#### **THE JACQUES WHITFORD NEWFOUNDLAND GEOSCIENCE SCHOLARSHIP**

This scholarship, valued at the annual interest on their endowment, has been established by Jacques Whitford Environment Limited and Newfoundland Geosciences Limited as a contribution to the *Opportunity Fund Campaign*. It will be awarded on an annually rotating basis to students in the Faculty of Engineering and Applied Science (particularly Civil Engineering), the Faculty of Science (particularly Biological Sciences) and Archaeology. Successful candidates are to be of scholarship standing and preferably show an interest in environmental issues. The scholarship will be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid

upon recommendation from the Dean/Director/Department Head of the appropriate discipline.

#### **WOMEN IN ENGINEERING MEMORIAL SCHOLARSHIP**

This scholarship has been established to commemorate the sudden and tragic deaths of fourteen women at L'Ecole Polytechnique in Montreal on December 6, 1989. Thirteen of the women who died so violently were pursuing studies in engineering, historically a non-traditional field for women. It is hoped this annual \$2,500.00 scholarship will encourage more women to study and work in this profession, thereby increasing the contribution of women to engineering and scientific endeavours. Funding support is provided by the Faculty of Engineering & Applied Science, C-CORE, Memorial University of Newfoundland Alumni Association and individual contributions. This award is tenable at Memorial University of Newfoundland to female students regardless of age, who are entering the Faculty of Engineering and Applied Science. To be eligible, applicants must demonstrate a commitment to the advancement of women in Engineering fields and an active involvement in wider issues of social concern to women, as well as sound scholastic ability. The committee may also consider applications from female students already enrolled in Engineering studies, provided they meet the eligibility criteria above. A special committee, consisting of representatives from the Faculty of Engineering and Applied Science, C-CORE, Memorial University of Newfoundland's Alumni Association, Women's Studies and Women in Science and Engineering meets annually to consider applications for this scholarship. The award will be made by the Senate Committee on Undergraduate Scholarships and Financial Aid on the recommendation of this committee.

### **3.6 Faculty of Medicine**

The following are available to students in the Faculty of Medicine based on a recommendation from the Dean.

#### **THE DR. BRIAN GERARD ADAMS MEMORIAL BURSARY FUND**

This bursary has been established by the friends and family of Dr. Brian Gerard Adams, in his memory. The bursary, valued at \$500.00, is available by application on the completion of second year medical studies. The recipient must be in good academic standing and demonstrate financial need. The bursary is made by the Senate Committee on Undergraduate Scholarships and Financial Aid, acting on the recommendation of the Dean of Medicine's Advisory Committee on Awards, Bursaries and Scholarships.

#### **THE ALCOHOL AND DRUG DEPENDENCY COMMISSION COMMEMORATIVE AWARDS**

These awards have been established to commemorate the Alcohol and Drug Dependency Commission (1982-1992). In an effort to promote the pursuit of addictions studies in various disciplines, it is hoped that recipients will pursue careers in addiction-related fields. Up to three awards, valued at \$750.00 each, are available annually and open to students who have completed a major or published paper at the undergraduate or graduate level or are completing an Honors Dissertation on addictions issues. It will be awarded on a rotating basis to students in Pharmacy, Nursing, Medicine, and Social Work with a Faculty of School receiving only one award in any given scholarship year. These awards will be granted by the Senate Committee on Undergraduate Scholarships and Financial Aid upon recommendation of the Dean/Director/Head of the respective Faculty or School.

#### **THE DR. ANDREW BAGBY AND SON ZACHARY ANDREW MEMORIAL BURSARY**

This bursary was initiated in memory of Andrew Bagby and his son Zachary by David and Kathleen Bagby, parents of Andrew. It will be awarded to a medical student in any year of study who is in good academic standing. The recipient must have an engaging demeanor and must relate with ease to people at all levels, as this was a unique characteristic of Dr. Bagby. Most important of the selection criteria, the student should be judged by his/her peers to have a positive, caring attitude fostering a sense of camaraderie within class life. The nominee must have demonstrated a genuine concern for, and shown a desire to impact positively on the lives of, his/her classmates. This will be assessed through either letters of reference or by a personal interview with a member of the selection committee. Nomination forms are available at the Office of Student Affairs, Faculty of Medicine. Selection will take place in June of each year and will be announced at the Annual Awards ceremony in the fall. This bursary will be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid on the basis of a recommendation from the Dean, Faculty of Medicine.

#### **THE ERIKA BARTLETT MEMORIAL BURSARY**

This bursary is the result of an endowment to the University funded by donations from family and friends of the Bartlett family, as well as students, staff and faculty members of the Faculty of Medicine. This bursary is valued at a portion of the annual accrued interest on the endowment and is available to a staff member and a medical student in alternate years. The Erika Bartlett Bursary is administered by the Senate Committee on Undergraduate Scholarships and Financial Aid and awarded on the basis of a recommendation from the Dean, Faculty of Medicine. Applications are available at the Office of Student Affairs, Faculty of Medicine.

##### **Selection Criteria Staff Member**

To be eligible a candidate must:

1. Complete the appropriate application form,
2. Be employed full-time with the Faculty of Medicine,
3. Use the bursary to fund study at the undergraduate level,
4. Submit a grade to the selection committee upon completion of the course.

##### **Selection Criteria Medical Student**

To be eligible a student must:

1. Be registered in the fourth year of medical studies.
2. Be matched to a postgraduate program in Oncology (Medicine/Surgery/Radiology). If a student is not matched to an Oncology program then the recipient will be chosen at the discretion of the selection committee.

#### **THE DONALD CANT STUDENTSHIP**

The annual Donald Cant Studentship, valued at \$750.00, is for researching and writing an original essay, suitable for publication, on some aspect of the History of Medicine. The studentship is open to any student enrolled in the MD program, Faculty of Medicine, Memorial University of Newfoundland. The award is made by the Senate Committee on Undergraduate Scholarships and Financial Aid acting on the decision of the Dean of Medicine's Advisory Committee on Awards, Bursaries and Scholarships on the basis of a proposal to be submitted by January 31 of each year.

#### **CENTRAL REGIONAL INTEGRATED HEALTH AUTHORITY AND DR. J.F. BROWN BURSARY**

Each year an award is made available to students from the former Central West Board. The annual income shall be awarded as a bursary to a student of any year from the former Central West area who demonstrates the greatest need and who, in the opinion of the Dean, has achieved adequate academic performance. Should for any reason a bursary not be awarded, the entire amount is to be returned to the fund, and the award made the following year in the usual manner. It will be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid acting on the decision of the Dean of Medicine's Advisory Committee on Awards, Bursaries and Scholarships. Applications may be submitted in September of each year.

#### **COOZE KEINATH SCHOLARSHIP**

This scholarship, valued at \$1,000.00 is established by Dr. Derek Cooze, a graduate of the Faculty of Medicine, Class of '85 and his



spouse, Dr. Kim Keinath. It will be awarded annually to a student in the Faculty of Medicine. It will be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid on the basis of scholarship standing and the recommendation of the Dean, Faculty of Medicine.

#### **THE DR. JOHN M. DARTE MEMORIAL FUND (MEDICINE)**

This fund, in memory of the first Professor and Chairman of Pediatrics at Memorial University of Newfoundland's Faculty of Medicine (1968-75), has been established by Mrs. J.M. Darté and Mrs. France Darté McCabe. With the income from this fund, up to four awards will be made annually with a value of \$650.00 each. To be considered for an award from this fund, a student must be in good academic standing but other factors, such as financial need, will be considered. The selection will be made in accordance with prevailing policies of the Faculty of Medicine and the University.

#### **THE WALTER DAVIS AWARD**

This award was established by the Newfoundland Lung Association to honour the work of Mr. Walter Davis in the field of chest diseases particularly, tuberculosis. The recipient will be the student in the Faculty of Medicine who achieves the best performance in the first year respiratory course. It will be valued at \$500.00 annually and awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid upon recommendation of the Dean of Medicine's Advisory Committee on Awards, Bursaries and Scholarships.

#### **THE DR. RALPH JOHN DAY AWARD**

This award is available to a student in the pre-clerkship program who completes the best undergraduate project in bowel or liver cancer, including other metastatic disease. This award is a result of a donation from Mrs. Jean Day in memory of her late husband, Dr. Ralph John Day. The value of the award will be determined by the annual income derived from the initial endowment. It will be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid upon recommendation of the Dean, Faculty of Medicine.

#### **THE HUNTER W. EARLE MEMORIAL SCHOLARSHIPS IN MEDICINE**

From the proceeds of a memorial fund established by colleagues of the late Dr. Hunter W. Earle, three scholarships will be made available annually to students enrolled in the Faculty of Medicine at Memorial University of Newfoundland, who best exemplify the characteristics of leadership, sportsmanship and interest in student activities and who have maintained a good academic standard. Two of the scholarships, valued at \$500.00 each, will be awarded to students who have completed the third year of Medicine. The third, valued at approximately \$400.00, will be awarded on the recommendation of the Dean of Medicine to a student in any year. All awards will be made by the Senate Committee on Undergraduate Scholarships and Financial Aid on the recommendation of the Dean of Medicine's Advisory Committee on Awards, Bursaries and Scholarships.

#### **THE ISIDOR EPSTEIN MEMORIAL SCHOLARSHIP**

This scholarship is awarded out of income derived from a bequest to Memorial University of Newfoundland by the late Mrs. Bella Levkovitz. From this income a scholarship of not less than \$700.00 is to be awarded as often as possible to an outstanding second, third, or fourth-year student in the Faculty of Medicine. It will be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid on the basis of a recommendation from the Dean, Faculty of Medicine.

#### **THE FACULTY OF MEDICINE OPPORTUNITY FUND SCHOLARSHIP**

This scholarship is the result of an endowment created from several general donations to the *Opportunity Fund* by various alumni and friends of the University and in particular of the medical school. Valued at the annual interest on the endowment, it will be awarded annually to a medical student in the first year of study at Memorial University of Newfoundland on the basis of scholarship standing. It will be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid on the recommendation of the Dean, Faculty of Medicine.

#### **THE DR. BRUCE A FRASER AWARD FOR CLERKSHIP ELECTIVES**

This award is made possible by a bequest from the estate of Dr. Bruce A. Fraser who was professor of Anatomy, Faculty of Medicine, Memorial University of Newfoundland from 1979-1992. The award, valued at the annual accrued interest on the endowment, is available to two (2) medical students doing clerkship elective in the United Kingdom and/or Ireland. Selection will be made on the basis of scholarship standing, financial need, and personal reference/interview. It will be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid upon recommendation of the Dean, Faculty of Medicine. A special application is required for this award and is available at the Student Affairs Office, Faculty of Medicine. Deadline for submission of applications is May 31st in any given year.

#### **THE DR. HENRY GAULT MEMORIAL SCHOLARSHIP**

Friends and colleagues of the late Dr. Henry Gault have established this scholarship in his memory. Dr. Gault had an international reputation in nephrology research, and was instrumental in building a strong program of clinical and research nephrology at the General Hospital and the Faculty of Medicine. Valued at a portion of the income on the investment, one or more, scholarships will be awarded at the end of the fourth year of undergraduate medical studies to a student who has demonstrated both interest in clinical research and academic excellence within Internal Medicine. Applications are available from the Student Affairs Office, Faculty of Medicine. Deadline for submission is January 31st. The scholarship will be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid on the recommendation of the Dean of Medicine's Advisory Committee on Awards, Bursaries and Scholarships.

#### **THE DR. WULF GROBIN MEMORIAL SCHOLARSHIP IN MEDICINE**

This scholarship has been established by Ida Parsons in memory of Dr. Grobin, a compassionate physician and humanitarian. Dr. Grobin was born in Latvia and studied in Switzerland, England and Scotland before moving to Newfoundland. He practiced medicine in Brooklyn, Bonavista Bay from 1938-1943 and St. John's from 1945-1958 when he moved with his family to Toronto. There he continued his medical career in the area of diabetes and the elderly. He had many varied interesting medical and personal experiences as an outdoor doctor, and developed a great warmth and affection for Newfoundland and Newfoundlanders, which lasted until his death in March of 2001. Valued at the accrued interest on the initial endowment and based on academics and financial need, the scholarship will be available to a student at the end of their first year in the Faculty of Medicine. It will be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid acting on the recommendation of the Dean of Medicine's Advisory Committee on Awards, Bursaries and Scholarships.

#### **THE MARY HONEYGOLD SCHOLARSHIP/BURSARY**

Established in memory of Mary Honeygold by her family, this scholarship/bursary is to be awarded to a student enrolled in the Faculty of Medicine, Memorial University of Newfoundland, on the basis of academic merit and need. Preference will be given to a student who has stated and/or demonstrated an interest in practising medicine in rural Newfoundland upon graduation. The award is to be made by the Senate Committee on Undergraduate Scholarships and Financial Aid acting on the advice of the Dean of Medicine's Advisory Committee on Awards, Bursaries and Scholarships.

#### **THE MARIE T. KENNEDY BURSARY**

In her will, Ms. Marie Theresa Kennedy left a bequest to Memorial University of Newfoundland to allow one or more bursaries of at least \$5,000.00 to be awarded annually. To be considered, a candidate must be a full-time undergraduate student, in any year of study, majoring in Science or Medicine - it will be awarded on a rotating basis. Students receiving scholarships or bursaries from other individuals or institutions, for the same scholarship year, will not be eligible. The bursary will be awarded on the basis of need and academic effort by the Senate Committee on Undergraduate Scholarships and Financial Aid upon recommendation from the appropriate

Dean.

#### **THE DR. J.H. KING MEMORIAL SCHOLARSHIP IN MEDICINE**

This scholarship, valued at \$500.00, has been donated to the University by Mrs. Gertrude King, widow of Dr. J.H. King, Specialist in Eyes, Ears, Nose and Throat, who practiced in Corner Brook for more than thirty years (1947-1978). The scholarship is open to students in second or third year of Medicine at Memorial University of Newfoundland who demonstrate the most promise. The award will be made by the Senate Committee on Undergraduate Scholarships and Financial Aid acting on the advice of the Dean of Medicine's Advisory Committee on Awards, Bursaries and Scholarships.

#### **THE NICHOLE MICHELLE LANE CANCER RESEARCH SCHOLARSHIP**

This scholarship is provided through the generosity of the Candlelighters Association of Newfoundland and Labrador in memory of Nichole Michelle Lane. It is awarded annually to a second-year medical student enrolled at Memorial University of Newfoundland who has undertaken the most outstanding summer research project in the area of cancer and particularly in the area of pediatric cancer. The award is made by the Senate Committee on Undergraduate Scholarships and Financial Aid, acting on the decision of the Dean of Medicine's Advisory Committee on Awards, Bursaries and Scholarships.

#### **THE DR. JANICE E. LESSARD SCHOLARSHIP IN GERIATRIC MEDICINE**

This Scholarship is awarded annually from income derived from an endowment donated by Dr. Janice E. Lessard, an alumna of Memorial University of Newfoundland, Faculty of Medicine and a practising Gerontologist, Toronto. It is to be awarded annually to a student who has completed third year of medical studies. The student will have demonstrated a desire to improve the functional and social well-being of the frail and elderly.

This award, in the amount of \$1,000.00, will be made by the Senate Committee on Undergraduate Scholarships and Financial Aid acting on the decision of the Dean of Medicine's Advisory Committee on Scholarships, Awards and Bursaries.

#### **THE MEDICAL SCHOOL ESSAY AWARD**

The Medical School Essay Award will be given annually to an undergraduate medical student and will be in the value of \$1,000.00. The award will be made following a competition in the form of an essay or short monograph pertaining to any aspect of medicine or the medical sciences, the topic being announced each year. The announcement of the topic will be made in March of each year, with the award being made twelve months later. A committee of three will adjudicate the competition. The award is made by the Senate Committee on Undergraduate Scholarships and Financial Aid, acting on the recommendation of the Dean's Advisory Committee on Scholarships, Awards and Bursaries. This award is supported by the K.B. Roberts Scholarship Fund, which was established in appreciation of the contribution made to the Faculty of Medicine by Dr. Kenneth Roberts.

#### **MEDICAL PRACTICE ASSOCIATE SCHOLARSHIPS**

The Medical Practice Associates offer three \$1000.00 awards annually, to students in first, third and fourth years of undergraduate medical studies. The awards are made on the basis of demonstrated ability within Clinical Medicine, as well as perceived financial need. The awards are made by the Senate Committee on Undergraduate Scholarships and Financial Aid acting on the decision of the Dean of Medicine's Advisory Committee on Awards, Bursaries and Scholarships.

#### **THE EFFIE AND LEANDER MERCER SCHOLARSHIP**

The scholarship was established by Dr. Jean Mercer in honour of her parents, Effie and Leander Mercer. Valued at the annual interest on the endowment, an award will be made alternately to a third year student in Medicine, Engineering and Post-Secondary Education (formerly Vocational Education). In any given year, if no student is eligible in the designated faculty it may be awarded to a student in one of the other two faculties. The successful student must have done most of his/her studies as a mature student. It will be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid on the basis of scholarship standing and a recommendation of the respective Dean. Financial need must also be taken into account.

#### **THE JOHN M. AND ELSA S. MORGAN SCHOLARSHIPS**

These scholarships have been bequested to the University by the late Dr. John M. Morgan, B.Sc., M.D., and have been named to commemorate Dr. Morgan and his wife Elsa. Up to twenty-five scholarships will be made available annually to undergraduate students who have completed at least one year of studies at Memorial University of Newfoundland within the areas specified below and who will be continuing in these programs. The scholarships, valued at a minimum of \$1,000.00 each, will be disbursed as follows:

- Five to the Faculty of Medicine
- Four to the School of Nursing
- Four to the Faculty of Education
- Four to the Department of Philosophy
- Four to the Department of Anthropology
- Two to the Department of Religious Studies (with preference to students of comparative religions)
- Two to students in Newfoundland Studies

The scholarships will be made on the basis of scholarship standing. Preference will be given, where possible, to students from the Port-de-Grave District.

#### **THE DR. CHARLES NARDINI MEMORIAL AWARD**

This award was initiated by the Class of 1986 in memory of a classmate who was tragically killed in a skidoo accident in the Spring of 1986. Valued at approximately \$500.00 annually, it will be given to a fourth year medical student who has scholarship standing. He/she should be selected by his/her classmates and judged as follows: The student who best exemplified the characteristics of leadership, friendliness, good humor, care and concern for fellow students and patients.

Selection will take place after completion of fourth year. The student will be nominated by classmates and recommended on the basis of a majority vote. Preference, when possible will be given to students from Labrador. The recommendation must be submitted to the Dean's Advisory Committee on Awards, Bursaries and Scholarships, Faculty of Medicine. It will then be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid on the basis of a recommendation from the Dean, Faculty of Medicine.

#### **THE DR. FRANCIS L. O'DEA SCHOLARSHIP**

This scholarship is established to commemorate the memory and work of Dr. Francis L. O'Dea in the field of Obstetrics and Gynecology, and is valued at a portion of the income on the investment. It is awarded annually to a third-year student in the Faculty of Medicine at Memorial University of Newfoundland, whose special interest lies in the area of Obstetrics and Gynecology. The scholarship is awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid acting on the recommendation of the Dean of Medicine and a Faculty Selection Committee.

#### **MARY E. PEDERSEN, M.D. SCHOLARSHIP IN MEDICINE**

This scholarship is made possible by a generous donation from Mary E. Pedersen, B.Sc., B.Med.Sc, M.D., CCFP, ABFP, FAAF. Five scholarships, valued at \$1,000.00 each, will be awarded annually, based on scholarship standing, to second year undergraduate medical students at Memorial University of Newfoundland. They will be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid on the recommendation of the Dean of Medicine's Advisory Committee on Scholarships, Awards and Bursaries.

**THE PATHOLOGY PRIZE**

This prize is awarded by the Pathology Department to the second-year student in the Faculty of Medicine whose performance in the General and Systems Pathology courses is considered by the members of the Discipline of Pathology to be most distinguished. The prize was initiated in 1984 by the members of the Discipline in recognition of the distinguished contributions by Dr. S.N. Huang, a previous Chairman of the Discipline, to Pathology and to medical education at Memorial University of Newfoundland. The award is made by the Senate Committee on Undergraduate Scholarships and Financial Aid on the recommendation of the Dean of Medicine's Advisory Committee on Awards, Bursaries and Scholarships.

**THE WILLIAM AND FRANCES POUND SCHOLARSHIP**

This scholarship is the result of a donation to the *Opportunity Fund* by Alumnus, Dr. Bernard Kai Fai So of Hong Kong. It is in recognition of the kindness and generosity shown to Dr. So by Mr. and Mrs. Pound during his years as a student at Memorial University of Newfoundland. Valued at the annual interest on the endowment, it will be awarded annually to a medical student at Memorial University of Newfoundland on the basis of scholarship standing. It will be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid on the recommendation of the Dean, Faculty of Medicine.

**THE DR. CALVIN N. POWELL BURSARY IN MEDICINE**

This bursary, which was established by Dr. Powell, is valued at \$1,000.00. It will be awarded annually to a student entering the third or fourth year of medical studies at Memorial University of Newfoundland on the basis of scholarship standing and demonstrated financial need. The recipient will hold no other concurrent award. The bursary will be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid on the recommendation of the Dean of Medicine's Advisory Committee on Scholarships, Awards and Bursaries.

**PRIZE IN PEDIATRICS**

This award, valued at \$500.00, is to be awarded to the most outstanding student in Pediatrics in the Clinical Clerkship Year (Third-Year Medical Studies). The award is made by the Senate Committee on Undergraduate Scholarships and Financial Aid, acting on the recommendation of the Dean of Medicine's Advisory Committee on Scholarships, Awards and Bursaries.

**PRIZE IN PEDIATRICS COURSE**

This award, valued at \$300.00, is to be awarded to the most outstanding student in the Pediatrics Course in the Second Year Medical Studies. The award is made by the Senate Committee on Undergraduate Scholarships and Financial Aid, acting on the recommendation of the Dean of Medicine's Advisory Committee on Scholarships, Awards and Bursaries.

**THE HARRY ROBERTS PRIZE IN PHARMACOLOGY**

In recognition of the contribution made to the community and to the medical profession by Dr. H.D. Roberts, Elizabeth Drugs Limited offers an annual prize of \$200.00 to the medical student who has shown academic excellence in the field of Pharmacology. The prize will be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid acting on the decision of the Dean of Medicine's Advisory Committee on Awards, Bursaries, and Scholarships.

**THE DR. J.B. ROBERTS MEMORIAL SCHOLARSHIP**

Friends and colleagues of the late Dr. J.B. Roberts have established this scholarship in his memory. It will be awarded annually to a medical student for the most outstanding performance in second year clinical skills. The value of this scholarship will be determined by the annual income derived from the initial endowment. It will be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid upon recommendation of the Dean, Faculty of Medicine.

**THE RYAN SCHOLARSHIP**

This scholarship, established by Helen Ryan in memory of family members, Mary B.H., Thomas Sr., Thomas Jr. and Mary, is valued at a portion of the accrued interest on an endowment. Based on scholarship standing and financial need it will be awarded annually to a student in the Faculty of Medicine. It will be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid upon the recommendation of the Dean, Faculty of Medicine.

**THE MORRIS AND GRAHAM WILANSKY MEMORIAL AWARD**

This award has been established by family and friends of Morris and Graham Wilansky, in their memory. An annual award of \$500.00 will be presented to the second-year medical student who has achieved highest academic excellence in the Neurosciences course. The award is made by the Senate Committee on Undergraduate Scholarships and Financial Aid acting on the decision of the Dean of Medicine's Advisory Committee on Awards, Bursaries and Scholarships.

### 3.7 Faculty of Science

The following are available to Faculty of Science students based on a recommendation from the Dean, Faculty of Science or the appropriate Director or Department Head.

**THE DR. H.J. ANDERSON DEPARTMENTAL AWARDS IN CHEMISTRY**

Four awards have been established through the Department of Chemistry to honour retired Faculty member and Professor Emeritus, Dr. H.J. Anderson. The recipients of these awards will have demonstrated academic excellence in Chemistry courses; Best Marks in Chemistry 2400 and 2401, Best Third Year Performance by a Chemistry Major, Second Best Third Year Performance by a Chemistry Major, and Best Fourth Year Performance by a Chemistry Major (not receiving a convocation award). These awards will be presented in May and June of each year based on the most recent year's academic performance. They will be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid upon the recommendation of the Head, Department of Chemistry.

**THE HUGH J. ANDERSON CHEMISTRY SCHOLARSHIP**

The scholarship is valued at \$5,000, and is provided via a contribution to Memorial University of Newfoundland by Mr. Darryl Fry. It will be awarded on the basis of scholarship standing and need to residents of Newfoundland and Labrador who have completed first year chemistry at Memorial University of Newfoundland and are declared majors in Chemistry. It will be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid based on a recommendation from the Head, Department of Chemistry.

**THE DR. CATER W. ANDREWS SCHOLARSHIP**

This scholarship, valued at a minimum of \$1,000.00, the gift of former students and colleagues of the late Dr. C.W. Andrews, is awarded to a Memorial University of Newfoundland student graduating with a B.Sc. in Biology who plans to pursue graduate work at Memorial University of Newfoundland in marine and/or freshwater biology. The scholarship is awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid on the recommendation of the Head of the Biology Department. In making the selection, exceptional industry and interest in the field, together with scholarship standing, will be the main criteria taken into account.

**THE ASTRAZENECA UNDERGRADUATE SCHOLARSHIP**

This scholarship, valued at \$4,000.00 annually, has been established by AstraZeneca Canada Inc. It will be awarded to Bachelor of Science students in their final year of the Honours program. It will be awarded on an annually rotating basis between Biology, Biochemistry and Chemistry respectively. It will be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid on the basis of scholarship standing and a recommendation from the Head of the appropriate department.

**THE ATREYA-HARITHA SCHOLARSHIP IN MATHEMATICS**

This scholarship is the result of a generous donation by Dr. K.R. and Nandinin Kothandaraman. Valued at \$1000 annually, it will be awarded on the basis of scholarship standing to a full-time student, either a senior level undergraduate or a graduate student in Mathematics and/or Statistics. In the case of an undergraduate student, the scholarship will be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid upon recommendation of the Head, Department of Mathematics and Statistics. In the case of a graduate student, it will be awarded by the Dean, School of Graduate Studies, also upon recommendation of the head, Department of Mathematics and Statistics.

**THE AU FAMILY SCHOLARSHIP IN BIOCHEMISTRY**

This scholarship is valued at the interest accruing annually on an endowment given to Memorial University of Newfoundland by the Au family. It is open to students entering their final year of study in the Biochemistry program who, during their studies, combined a record of high academic achievement and scholarship standing with active involvement in extracurricular activities within the University, including athletic prowess at the varsity level. The award is made by the Senate Committee on Undergraduate Scholarships and Financial Aid on the recommendation of the Head, Department of Biochemistry.

**THE BENNETT/KHAN BURSARY IN BIOLOGY**

This bursary is made possible through a fund established by an anonymous donor in honour of Dr's Gordon Bennett and Rasul Khan. Valued at the interest on the initial endowment, it will be awarded annually to a full time student beyond second year who is majoring in Biology with particular reference to parasitology or another branch of invertebrate zoology. It will be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid on the recommendation of the Head, Department of Biology.

**THE E.A. BISHOP (1889-1953) MEMORIAL SCHOLARSHIP**

This scholarship, established to honor the memory of E.A. Bishop, a teacher in Newfoundland and Labrador, is the result of a generous donation to Memorial University of Newfoundland by his son, John. Interest on the fund will provide a scholarship to full-time undergraduate students after completion of their first year at Memorial University of Newfoundland who are dependants of teachers in the public school system of Newfoundland and Labrador. Applicants must be students in the Faculties of Arts or Science and be of scholarship standing. The scholarship is valued at approximately two semesters tuition for five courses. If, in any year, there is no eligible candidate, the scholarship will not be awarded; however, a student may be awarded the scholarship more than once. It will be awarded on the basis of a special application which may be obtained from the Scholarships and Awards office, room 4018, University Centre, telephone (709) 737-3956.

**W.J. BLUNDON SCHOLARSHIP**

The W.J. Blundon Scholarship, in memory of Professor W.J. Blundon, Head of the Department of Mathematics and Statistics from 1948 to 1976, will be awarded on the basis of academic excellence to students majoring in Mathematics and/or Statistics. The scholarship will be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid on the recommendation of the Head of the Department of Mathematics and Statistics.

**BP CANADA ENERGY COMPANY SCHOLARSHIPS IN EARTH SCIENCES**

These Scholarships, the gift of BP Canada Energy Company, are valued at \$2,500.00 each annually and are awarded to two students in the Earth Sciences program at Memorial University of Newfoundland. One scholarship will be awarded to a student in Geology and one to a student in Geophysics. Normally students must be registered full-time in the semester for which these scholarships are granted, however, in the case of a student who has met all academic requirements for their Honours degree, except the Honours dissertation, part-time registration will be accepted. Candidates must have demonstrated high academic achievement, and expressed an interest in oil and gas exploration and development through their choice of courses and/or dissertation subjects. The scholarships will be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid on the basis of scholarship standing and a recommendation from the Head, Department of Earth Sciences.

**THE DR. S. W. BRECKON SCHOLARSHIP IN PHYSICS**

This scholarship, valued at \$1000.00, is the gift of former students and colleagues of Dr. Breckon and is awarded to the full-time honours Physics student who has the best overall academic performance upon completion of the third or fourth year honours Physics program and subsequent enrollment in the following year.

The award is made by the Senate Committee on Undergraduate Scholarships and Financial Aid on the recommendation of the Head of the Department of Physics. Applications should be directed to the Head of the Department of Physics.

**THE MURRAY H. BROOKER SCHOLARSHIP FOR EXCELLENCE IN CHEMISTRY**

The scholarship is valued at the annual interest on an endowment established in memory of Dr. Murray H. Brooker who was a professor in the Department of Chemistry when he passed away in 2000. It will be awarded to a student who is beyond first year at Memorial University of Newfoundland, who is a declared major in Chemistry and who has been accepted to work in a Chemistry Laboratory for the current/upcoming summer. It will be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid on the basis of scholarship standing and a recommendation from the Head, Department of Chemistry.

**THE DR. WERNER D. BRUCKNER SCHOLARSHIP**

This scholarship, valued at \$500.00, honours the memory of Werner D. Bruckner, Head of the Department of Geology at this University from 1959 to 1968, J. P. Howley Research Professor from 1968 to 1977 and Professor Emeritus, 1978. It is awarded annually to an undergraduate student majoring in Earth Sciences.

The award will be based upon scholarship standing but, in recognition of other concerns held as particularly important by Dr. Bruckner, financial need and qualities of character will also be considered. The scholarship will be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid on the recommendation of the Head, Department of Earth Sciences.

**THE BRUTON SCHOLARSHIP FUND**

Dr. F.A. Bruton, friend and colleague of J.L. Paton, taught Nature Study to teachers in three successive Memorial University College summer schools, from 1926-28, at Paton's request. At his death in 1930, Dr. Bruton made a bequest to the College from which two Bruton Scholarships are awarded. These scholarships, valued at \$500.00 each, are awarded annually to students who have demonstrated interest in Plant Biology. One award will be available to a student majoring in Biology whose special interest is in the field of Plant Biology. The second award will be available to an Education student whose main area of interest is in the teaching of science, in particular, plant biology. In the absence of a suitable candidate from the one department, two awards may be made by the other department in accordance with the above conditions. Academic ability and financial need will be taken into consideration in making these awards. They will be made by the Senate Committee on Undergraduate Scholarships and Financial Aid acting on the advice of the department concerned.

**BUCHANS SCHOLARSHIP FUND OF ASARCO INCORPORATED**

ASARCO Incorporated has established a scholarship fund, the annual interest on which will provide for students enrolled in the Department of Earth Sciences, Memorial University of Newfoundland, either a scholarship for post-graduate study and research, valued at \$5000.00; or two scholarships for undergraduate study, valued at \$500.00 each. The latter scholarships will be available only when no suitable candidate can be found for the former. In order to qualify for these awards, students must be native-born Newfoundlanders or

graduates of Newfoundland high schools. In the case of the graduate scholarship, the award will be made by the Dean of Graduate Studies on the recommendation of the Head, Department of Earth Sciences; in the case of the undergraduate scholarships, by the Senate Committee on Scholarships and Financial Aid on the recommendation of the Head, Department of Earth Sciences. Should no candidates be available in any year, the awards may be held over.

#### **THE CANADIAN INSTITUTE OF MINING, METALLURGY AND PETROLEUM (NEWFOUNDLAND BRANCH) GOLDEN JUBILEE SCHOLARSHIP**

This scholarship valued at a portion of the income on the investment, will be awarded to a student entering the final year of undergraduate studies at Memorial University of Newfoundland. Based on scholarship standing, the scholarship will be available to a student majoring in a field of study that is covered by the fields of interest of the Canadian Institute of Mining, Metallurgy and Petroleum specifically; Earth Sciences, Geophysics, Geography, Economics, Environmental Science, Engineering, Business and Commerce. Financial need may be taken into consideration. The scholarship will be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid.

#### **THE CANADIAN INSTITUTE OF MINING, METALLURGY AND PETROLEUM (NEWFOUNDLAND BRANCH) SILVER JUBILEE SCHOLARSHIP**

This \$1,500.00 annual award is available to students in the final or penultimate year in Earth Sciences at Memorial University of Newfoundland. Scholastic achievement is the principal requirement governing the award but economic need and character may be taken into account. The scholarship will be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid acting on the recommendation of the Head of the Department of Earth Sciences.

#### **THE CHEVRON CANADA RESOURCES SCHOLARSHIP IN GEOLOGY AND GEOPHYSICS**

This scholarship, valued at a portion of the annual income on an endowment created at Memorial University of Newfoundland by Chevron Canada Resources, will be awarded annually to an undergraduate 3rd or 4th year student studying Geology or Geophysics in the Department of Earth Sciences. It will be awarded on the basis of scholastic standing and financial need to a student who graduated from a high school in Newfoundland and Labrador. The scholarship will be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid on the recommendation of the Head, Department of Earth Sciences.

#### **THE CHURCHILL FALLS (LABRADOR) CORPORATION LIMITED SCIENCE SCHOLARSHIP**

These scholarships valued at approximately \$2,500.00 each annually, are the result of an endowment to *The Opportunity Fund* by the Churchill Falls (Labrador) Corporation Limited. They will be awarded to second year students or beyond entering the Faculty of Science. The scholarships will be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid on the basis of scholarship standing and a recommendation from the Dean, Faculty of Science. All else being equal, preference will be given to students from Labrador.

#### **THE CANADIAN SOCIETY FOR CHEMISTRY 1996 CONFERENCE AND EXHIBITION SCHOLARSHIP**

This scholarship, valued at the annual interest on the initial endowment, was established in recognition of the efforts of the Organizing Committee and the over 100 volunteers for the 1996 Canadian Society of Chemistry Conference which was hosted by Memorial University of Newfoundland. This scholarship will be awarded annually to a student in Chemistry based on the results of the National CIC Chemistry examinations or its successors. The scholarship will be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid upon recommendation of the Head, Department of Chemistry.

#### **THE CAPTAIN JAMES COOK MEMORIAL SCHOLARSHIP**

A fund was established in 1979 by members of the Department of Geography to honour the memory of Captain James Cook (1728-79), explorer, navigator and cartographer, whose years of painstaking mapping of the coasts of Newfoundland and Labrador laid the basis for a comprehensive and scientific knowledge of the geography of the province.

One or more scholarships, valued at not less than \$600.00, will be awarded annually by the Senate Committee on Undergraduate Scholarships and Financial Aid on the recommendation of the Department of Geography to a student or students demonstrating particular merit in Geography.

#### **THE DR. DOUGLAS L. COOPER MEMORIAL SCHOLARSHIP**

This scholarship fund has been established in honour of Dr. Cooper who was the first department head of Chemistry at Memorial University of Newfoundland. The fund will provide several scholarships valued at a minimum of \$1,500.00 each annually. They will be awarded to Chemistry students entering their third year of a Bachelor of Chemistry program (General or Honours). If there are not enough eligible third year students in a given year, it will be open to those in their fourth year. It will be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid on the basis of scholarship standing and a recommendation from the Head, Department of Chemistry.

#### **THE ERNST R. DEUTSCH MEMORIAL SCHOLARSHIP IN GEOPHYSICS**

This scholarship is named in honour of Dr. Deutsch, a long-time faculty member at Memorial University of Newfoundland who passed away in 2000. Valued at a portion of the income on the investment the scholarship will be awarded annually to a senior undergraduate student in the Earth Sciences (or related field of Physics) whose concentration is Geophysics. If there is no qualified undergraduate student, the scholarship will be awarded to a full-time graduate student in Earth Sciences who has received an undergraduate degree from Memorial University of Newfoundland and whose area of concentration is Geophysics. It will be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid on the basis of scholarship standing and a recommendation from the Head, Department of Earth Sciences in the case of an undergraduate student; in the case of a Graduate Student it will be awarded by the Dean of Graduate Studies on the recommendation of the Head, Department of Earth Sciences.

#### **THE FACULTY OF SCIENCE OPPORTUNITY FUND SCHOLARSHIP**

This scholarship is the result of an endowment created from several general donations to the *Opportunity Fund* by various alumni and friends of the University and in particular of the Faculty of Science. Valued at the annual interest on the endowment, it will be awarded annually to a student beyond first year in the Faculty of Science at Memorial University of Newfoundland on the basis of scholarship standing. It will be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid on the recommendation of the Dean, Faculty of Science.

#### **DR. L.A.W. FELTHAM SCHOLARSHIP**

This scholarship began with fundraising within the Biochemistry Department during the 1996 *Opportunity Fund* Campaign. It is named for Dr. Feltham, the founding head of the department. The interest on the endowment will provide a scholarship for a student in the B.Sc. Program in Biochemistry. It will be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid to a student beyond second year on the basis of scholarship standing and a recommendation from the Head, Department of Biochemistry.

#### **THE NICOLE FORTIER MEMORIAL SCHOLARSHIP**

The family and friends of Nicole Fortier have established this scholarship in her memory to encourage and assist women to develop their full academic potential. Valued at \$1,000.00, it is open to single mothers who are enrolled in full-time undergraduate studies at Memorial University of Newfoundland. First preference will be given to single mothers who are doing a major in Geography. In the event of no such eligible candidates it will be awarded to a single mother doing any undergraduate program. It will be awarded by the Senate

Committee on Undergraduate Scholarships and Financial Aid taking into account financial need as well as scholarship standing.

#### **THE SAMUEL AND MILLICENT GRANDY MEMORIAL SCHOLARSHIP**

This scholarship, established in 1998 by the Grandy Family to honour the memory of their parents, will be valued at a portion of the annual accrued interest on the initial endowment. It will be awarded on the basis of scholarship standing and demonstrated aptitude and potential in the science of computing to an undergraduate student beyond first year in full time study of the Computer Science program (declared major for B.Sc.) at Memorial University of Newfoundland. It will be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid upon the recommendation of the Head, Department of Computer Science.

#### **THE DR. PATRICIA GIOVANNETTI MEMORIAL BURSARY**

The Newfoundland Dietetic Association sponsors this Bursary of \$600.00 awarded annually to a student completing the second year of the Dietetics program in the Department of Biochemistry at Memorial University of Newfoundland and who is attending Acadia University the following year. The scholarship will be awarded on the basis of scholastic standing and financial need, to a student who is planning to enter a dietetic internship program upon graduation. The award is made by the Senate Committee on Undergraduate Scholarships and Financial Aid on the recommendation of the Head of the Biochemistry Department.

#### **THE VINCENT HODDER MEMORIAL SCHOLARSHIP**

This scholarship, valued at \$5,000.00, is established by Marguerite Hodder in memory of her husband, Vincent. It will be awarded annually to a senior student (i.e. 3rd year and beyond) with a preference to an honours student doing a research project with a clear marine focus in the Faculty of Science. It will be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid on the basis of scholarship standing upon the recommendation of the Dean, Faculty of Science.

#### **DR. BYRON HYNES MEMORIAL SCHOLARSHIP**

Friends of Dr. Byron Hynes have established this scholarship in his memory. It is valued at \$1,000.00 and will be awarded on an annually rotating basis to a student majoring in either Economics or Geology. It will be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid on the basis of scholarship standing and a recommendation from the head of the appropriate department.

#### **THE MARIE T. KENNEDY BURSARY**

In her will, Ms. Marie Theresa Kennedy left a bequest to Memorial University of Newfoundland to allow one or more bursaries of at least \$5,000.00 to be awarded annually. To be considered, a candidate must be a full-time undergraduate student, in any year of study, majoring in Science or Medicine - it will be awarded on a rotating basis. Students receiving scholarships or bursaries from other individuals or institutions, for the same scholarship year, will not be eligible. The bursary will be awarded on the basis of need and academic effort by the Senate Committee on Undergraduate Scholarships and Financial Aid upon recommendation from the appropriate Dean.

#### **THE DR. B.K. KIM SCHOLARSHIP IN STATISTICS**

This scholarship will be awarded annually to an undergraduate student whose major subject of study is Statistics. The award honours the memory of the late Dr. B.K. Kim who taught in the Department of Mathematics and Statistics from 1976-84. The scholarship, with a value of at least \$500.00, will normally be based on academic achievement in third year and/or fourth year courses and will be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid on the recommendation of the Head, Department of Mathematics and Statistics.

#### **THE JOHN KINGSTON MEMORIAL SCHOLARSHIP**

This scholarship, valued at \$600.00, was established in memory of John F. Kingston, a former member of the faculty of the Department of Chemistry at Memorial University of Newfoundland. It will be awarded annually to a student majoring in Chemistry, who has completed at least 18 credit hours in Chemistry courses, on the basis of academic merit and financial need. The scholarship is awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid on the recommendation of the Head, Department of Chemistry.

#### **THE JULIUS AND BELLA LEVKOVITZ MEMORIAL SCHOLARSHIP**

This scholarship is awarded out of income derived from a bequest to Memorial University of Newfoundland by the late Mrs. Bella Levkovitz. From this income a scholarship of not less than \$700.00 is to be awarded as often as possible to an outstanding student in second, third or fourth year, or graduate studies in Pure or Applied Science at Memorial University of Newfoundland. It will be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid on the basis of a recommendation from the Dean, Faculty of Science.

#### **THE LGL LIMITED SCHOLARSHIP IN MARINE SCIENCE**

This scholarship, valued at \$1,000.00, was established by LGL Limited. It will be awarded annually to a student in the Faculty of Science who is following a program of studies related to Marine Science. The successful candidate will be either a fourth year undergraduate student doing an honours program or a graduate student. Wherever possible, preference will be given to a student from a fishing family, but other students will be considered. In the case of undergraduate students the scholarship will be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid on the basis of scholarship standing. In the case of graduate students the scholarship will be awarded by the Dean, School of Graduate Studies. In both cases it will be based upon a recommendation from the Dean, Faculty of Science.

#### **THE HUGH LILLY MEMORIAL SCHOLARSHIP**

This scholarship, presently valued at a minimum of \$3000.00 per annum, will be awarded to the most promising graduate in the Geosciences at Memorial University of Newfoundland who is continuing studies at the post-graduate level, here or elsewhere. The award honours the memory of the late Hugh Lilly, an instructor in the Earth Sciences Department. Selection of the winning candidate will rest with the Senate Committee on Undergraduate Scholarships and Financial Aid in consultation with the Earth Sciences Department.

#### **THE HUGH LILLY UNDERGRADUATE SCHOLARSHIP**

This scholarship, valued at \$300.00 per annum, will be awarded to an undergraduate student entering the third year of studies in a Geology major program. The award honours the memory of the late Hugh Lilly, an instructor in the Earth Sciences Department. In making the award, academic achievement, character and financial need may be taken into consideration. The scholarship is awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid on the recommendation of the Head, Earth Sciences Department.

#### **THE LOUGHNEY-BROSNAN SCHOLARSHIP IN BIOCHEMISTRY**

This scholarship is valued at the interest accruing on an endowment given to Memorial University of Newfoundland by the Loughney family. It is open to an undergraduate student studying the honours program in Biochemistry at Memorial University of Newfoundland and will be awarded on the basis of scholarship standing. Preference will be given to a student entering the final year of the Biochemistry (Honours) Program. It will be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid upon recommendation of the Head, Department of Biochemistry.

**THE WILLIAM KENNETH MACLEOD SCHOLARSHIP**

This scholarship is the result of a donation to Memorial University of Newfoundland in 2002, in memory of Mr. MacLeod. Mr. MacLeod was a recipient of the Provincial Government Senior Jubilee Scholarship in the early 1930's. The scholarship will be valued at the annual interest on the endowment and will be awarded to a Newfoundland and Labrador undergraduate student who has a recognized disability (physical or learning). The scholarship will be awarded on the basis of scholarship standing to a student in the Faculty of Science. Where possible, preference will be given to financially needy students as determined by the University. In a year when a student meeting the above criteria cannot be identified, the scholarship may be awarded to any undergraduate student who demonstrates need. It will be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid on the basis of an application.

**THE MRS. E.D. MATTHEWS MEMORIAL SCHOLARSHIP IN MATHEMATICS AND STATISTICS**

This scholarship honours the memory of the late Mrs. Evelyn Matthews who taught in the Department of Mathematics and Statistics, Memorial University of Newfoundland, from 1959-78. It has a value of at least \$500.00, and will be awarded on an annual basis to an undergraduate student whose major subject of study is Mathematics or Statistics. The scholarship will be based on academic merit and will be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid on the recommendation of the Head, Department of Mathematics and Statistics.

**THE CARMEN AND OLIVE MEWS CHEMISTRY SCHOLARSHIP**

This scholarship is the result of an endowment to Memorial University of Newfoundland from the estates of Carmen and Olive Mews. Carmen Mews enjoyed a long career with the Department of Chemistry. He and his wife Olive, both of whom were keenly interested in the welfare of undergraduate students, wished to endow a scholarship to support a student majoring in Chemistry. This scholarship, valued at a portion of the annual interest, will be awarded to a student beyond their first year of study who has demonstrated scholarship standing. It will be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid, upon the recommendation of the Head, Department of Chemistry.

**THE GRACE MORGAN SCHOLARSHIP IN NUTRITION**

This scholarship is valued at the interest accruing on an endowment given to Memorial University of Newfoundland by Mrs. Grace Morgan. It is open to an undergraduate student studying nutrition at Memorial University of Newfoundland and will be awarded on the basis of scholarship standing. Preference will be given to a student entering the final year of the nutrition program. It will be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid upon recommendation of the Head, Department of Biochemistry.

**THE DR. GEORGE MOSKOVITS AWARD**

This award is made possible through a fund established by former students and colleagues of Dr. George Moskovits to honour his retirement from the Department of Biology in 1984. The award is valued at \$200.00 and will be made annually to a full-time senior student who has shown outstanding performance in the field of cell biology/microbiology. It will be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid on the recommendation of the Head, Department of Biology.

**THE E.R.W. NEALE UNDERGRADUATE SCHOLARSHIP OF THE G.A.C. (NEWFOUNDLAND SECTION)**

The E. R. W. Neale Undergraduate Scholarship is offered annually by the Newfoundland Section of the Geological Association of Canada. The scholarship is open to declared majors in Earth Sciences at Memorial University of Newfoundland. One scholarship valued at \$1000 will be offered annually, on the basis of academic achievement, financial need and character. The scholarship is awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid on the recommendation of the Head, Department of Earth Sciences.

**THE NEWFOUNDLAND GARDENING SCHOLARSHIP**

This scholarship is the result of proceeds from the sale of a book by Dr. Peter J. Scott entitled Newfoundland Gardening. It will be awarded annually to a Biology student who is graduating and intends to pursue a career in plant biology. In the event that such a candidate is not available, it will be awarded to a second year Biology student from Memorial University of Newfoundland going on to study horticulture. The scholarship will be valued at the interest accruing on the initial endowment and will be awarded on the basis of scholarship standing by the Senate Committee on Undergraduate Scholarships and Financial Aid upon recommendation of the Head, Department of Biology.

**THE NEWFOUNDLAND HOME ECONOMICS ASSOCIATION SCHOLARSHIP**

This scholarship, valued at \$800.00, will be awarded annually to a student enrolled in the Dietetics Program at Memorial University of Newfoundland, preferably to a student in the second year of the program. Where possible it will be given to an Honours candidate. This scholarship is tenable for one year and will be awarded on the basis of scholarship standing and financial need. It is awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid on the recommendation of the Head, Department of Biochemistry.

**THE NEWFOUNDLAND MARGARINE - UNILEVER CANADA SCHOLARSHIP**

This scholarship, valued at the annual interest on an initial endowment, will be awarded annually to a student enrolled in the Nutrition major in the Department of Biochemistry at Memorial University of Newfoundland. The award will normally be given to an honours student in his/her final year. It will be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid on the basis of scholarship standing and a recommendation from the Head, Department of Biochemistry.

**THE NEWFOUNDLAND AND LABRADOR OUTFITTER'S ASSOCIATION SCHOLARSHIP**

This scholarship, valued at \$500.00, will be awarded annually to a student in a science program at Memorial University of Newfoundland who is registered in at least his or her third year of studies. The scholarship recipient must plan to pursue an undergraduate academic program leading to a career in Inland Fisheries, Wildlife Management, Wildlife Biology, or a related field of study. The scholarship will be awarded on the basis of academic excellence. The award will be made by the Senate Committee on Undergraduate Scholarships and Financial Aid on the recommendation of the appropriate department head.

**THE NORANDA SCHOLARSHIP**

This scholarship valued at the annual interest, has been established by the Noranda Foundation as part of the *Opportunity Fund* campaign. It will be awarded on an annually rotating basis between students in Earth Sciences and Engineering and Applied Science. It will be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid on the basis of scholarship standing and a recommendation from the Dean/ Department Head of the appropriate discipline

**THE DR. V. STEPHEN PAPEZIK SCHOLARSHIP**

This scholarship, valued at a minimum of \$1000.00, honours the memory of Dr. V. Stephen Papezik, Professor of Geology at Memorial University of Newfoundland from 1961 to 1984. It is awarded annually to an undergraduate student majoring in Earth Sciences whose specialization is closest to mineralogy.

The award will be based upon scholarship standing but in deciding on candidates of equal scholastic attainment, need may be the deciding factor. The scholarship will be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid on the recommendation of the Head, Department of Earth Sciences.

**THE BRUCE PARDY FAMILY SCHOLARSHIP**

This scholarship, valued at the annual interest on an endowment, has been established by the Pardy Family. It will be awarded annually to an undergraduate student in the Faculty of Science. It will be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid on the basis of scholarship standing and a recommendation from the Dean, Faculty of Science.

**THE MAUREEN PENNEY MEMORIAL SCHOLARSHIP**

This \$400.00 scholarship, donated by the Geological Association of Canada, honours the memory of Maureen Penney, B.Comm.(MUN), who was Associate Secretary-Treasurer of the Geological Association of Canada from 1983 to 1989. It is awarded annually to a second- or third-year undergraduate student majoring in Earth Sciences. In making the award, academic achievement will be the primary consideration, but other factors, such as involvement in student activities, will be taken into account. The scholarship is awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid on the recommendation of the Head, Department of Earth Sciences.

**THE DENNIS R. PRINCE MEMORIAL SCHOLARSHIP**

The Dennis R. Prince Memorial Scholarship has been made available by the Prospectors and Developers Association of Canada, Falconbridge Ltd., the Porcupine Prospectors and Developers Association, the mining community, colleagues, friends and family of the late Dennis Prince. Dennis graduated from Memorial University of Newfoundland in 1970 with a BSc Honours degree. He led a distinguished career as a geologist with twenty-nine years at Falconbridge Ltd.

The annual scholarship, valued at \$2,000.00 and an engraved Brunton compass, will be awarded to a final year student specializing in mineral exploration and development in the honours program of the undergraduate degree in Earth Sciences at Memorial University of Newfoundland. If there is no qualified undergraduate student a graduate student who has been accepted for post-graduate studies in mineral exploration and development at Memorial University of Newfoundland and who intends to pursue a career in the mineral industry, will be considered. The qualifying student must demonstrate scholarship standing, strong personal values including a strong work ethic and high personal integrity. Active participation and leadership in geological associations and activities such as The Alexander

Murray Geology Club and the Geological Association of Canada may be taken into consideration as well as financial need. In the case of undergraduates the scholarship will be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid. In the case of graduates it will be awarded by the Dean, School of Graduate Studies. In both cases it will be based on a recommendation from the Head, Department of Earth Sciences in consultation with the PDAC and the Prince family.

**PROFESSIONAL ENGINEERS AND GEOSCIENTISTS NEWFOUNDLAND AND LABRADOR PAST PRESIDENTS' GEOSCIENCE SCHOLARSHIP**

This scholarship valued at a minimum of \$1,000.00 was established by the Professional Engineers and Geoscientists Newfoundland and Labrador. It is awarded annually on the basis of scholarship standing to a Geoscience student at Memorial University of Newfoundland. It is open to either graduate or undergraduate students in any given year and will be allocated as such at the discretion of the Department Head. In the case of undergraduates, the scholarship is awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid upon the recommendation of the Head, Department of Earth Sciences in consultation with PEGNL. In the case of graduates it is awarded by the Dean of Graduate Studies upon recommendation of the Head, Department of Earth Sciences, in consultation with PEGNL.

**THE ROTARY CLUB (ST. JOHN'S NORTHWEST) SCHOLARSHIP**

This scholarship has been established by the Rotary Club of St. John's Northwest. It is valued at \$1,000.00 annually and will be awarded to a full-time student beyond first year, pursuing a Bachelor of Arts or a Bachelor of Science with a major in one of the Social Sciences, who has demonstrated a commitment to community service. The recipient of this scholarship will be a long-term resident of Newfoundland and Labrador who completed high school in this province and will have demonstrated scholarship standing. It will be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid upon the joint recommendation of the Dean of Arts and the Dean of Science. This scholarship will be presented at one of the regular meetings of the Rotary Club of St. John's Northwest and the recipient will be asked to speak about their goals and community service work.

**THE ROBERTA H. SELLARS SCHOLARSHIP**

This scholarship is the result of an endowment by the Rev. Walter C. Sellars in recognition of his wife Roberta for her loyal and loving support, particularly while he was struggling through university. The scholarship will be awarded annually to a full-time student in any year in either the Faculty of Arts or Science on a rotating basis. It will be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid based on scholarship standing and financial need and upon the recommendation of the appropriate Dean.

**THE RICK SHEPPARD MEMORIAL SCHOLARSHIP**

This scholarship, valued at \$500.00 has been established by the friends and colleagues of Rick Sheppard, a graduate of Memorial University of Newfoundland (Geology--Class of '81), who died in the Ocean Ranger Disaster. The award is open to undergraduate students majoring in Geology. Academic standing, financial need and active participation in the Alexander Murray Geological Club will be taken into consideration in selecting candidates. The award will be made by the Senate Committee on Undergraduate Scholarships and Financial Aid, acting on the recommendation of the Head, Department of Earth Sciences.

**THE JAMES (JAY) STACKHOUSE MEMORIAL SCHOLARSHIP**

From a sum of money donated to the University by the friends of the late James (Jay) Stackhouse, a geologist who graduated from this University in 1976, a scholarship has been established for students majoring in the Earth Sciences at Memorial University of Newfoundland. Undergraduate students in their penultimate year of the program may apply. The value of the award will be determined by the annual interest earned on the fund. The scholarship will be awarded at the end of the fall semester by the Senate Committee on Undergraduate Scholarships and Financial Aid acting on the recommendation of the Head, Department of Earth Sciences.

**THE SUN LIFE FINANCIAL SCHOLARSHIP IN APPLICATIONS OF TECHNOLOGY**

The Sun Life Financial Scholarship in Applications of Technology is consistent with the company's belief that education is key to the future well-being of individuals, business and society. The scholarship, valued at the annual interest on the endowment, will be designated on an annually rotating basis to a student on the Corner Brook campus and the St. John's campus. It will be awarded to a student within the faculties of Science, Engineering and Applied Science and Business Administration who is focussing his/her studies on the application of technology and has demonstrated scholarship standing. In addition, the student will have actively participated in extra-curricular activities and have been active in student life. The scholarship will be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid on the recommendation of the appropriate Dean and/or the Principal of Sir Wilfred Grenfell College.

**THE ERIC A. SWANSON SCHOLARSHIP IN EARTH SCIENCES**

This scholarship, valued at \$3,000.00, is established by Eleanor Swanson in honour of her father, Eric. It will be awarded annually to a student in the Faculty of Science, who is following a program of studies in Earth Sciences. The scholarship will be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid on the basis of scholarship standing and a recommendation from the Head, Department of Earth Sciences.



**DR. SIEGFRIED THOMEIER MEMORIAL PRIZE IN PURE MATHEMATICS**

The prize, the interest from a donation by an anonymous donor, is awarded to a fourth or fifth year student majoring in Mathematics with a concentration in Pure Mathematics. The award is made by the Senate Committee on Undergraduate Scholarships and Financial Aid upon the recommendation of the Head, Department of Mathematics and Statistics.

**THE EUGENE VINCENT MEMORIAL SCHOLARSHIP**

This undergraduate scholarship has been established by the Baie Verte-Springdale Branch of the Canadian Institute of Mining and Metallurgy, in memory of the late Eugene Vincent, a former President and active member of the Branch. The award, which has a value of at least \$300.00, will be restricted to residents of Newfoundland and Labrador who are enrolled beyond the first-year level of the Earth Sciences program at Memorial University of Newfoundland and who are intending to pursue careers in the mining field. Selection of a candidate will be made by the Senate Committee on Undergraduate Scholarships and Financial Aid on the recommendation of the Head, Department of Earth Sciences.

**THE ROBERT WESTCOTT MEMORIAL SCHOLARSHIP**

This scholarship was established by Mrs. Mary Westcott in memory of her late husband, Mr. Robert Westcott. It is valued at a portion of the annual interest on an endowment and will be awarded on a rotating basis to students beyond first year who have a strong commitment to post-secondary education and who are majoring in Business Administration and/or Economics. It will be based on scholarship standing and financial need and will be awarded to a student who was born in Newfoundland and Labrador. This scholarship will be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid upon the recommendation of the Dean/Department Head of the appropriate discipline.

**THE DR. HOWARD LOUIS WHITE MEMORIAL AWARD IN CHEMISTRY**

This award is the result of a donation to Memorial University of Newfoundland from family members of the late Dr. White, class of 1941. It is awarded to a student majoring in Chemistry who is in 2nd year or beyond. Valued at the annual accrued interest on an initial endowment and based on academic standing, it is awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid acting upon a recommendation from the Head, Department of Chemistry.

**JACQUES WHITFORD LTD. SCHOLARSHIP**

This scholarship, valued at \$2,000 annually, has been established by Jacques Whitford Limited. Based on scholarship standing it will be awarded, on an annually rotating basis, to students who have just completed Term 2 or Term 5 in the Faculty of Engineering and Applied Science and students beyond second year in the Faculty of Science. This scholarship also includes one work term/summer employment with the company. The scholarship will be awarded at the end of the winter semester for the coming spring/summer by the Senate Committee on Undergraduate Scholarships and Financial Aid based on a recommendation from the Dean of the Faculty on rotation in consultation with the company.

**THE JACQUES WHITFORD NEWFOUNDLAND GEOSCIENCE SCHOLARSHIP**

This scholarship, valued at the annual interest on their endowment, has been established by Jacques Whitford Environment Limited and Newfoundland Geosciences Limited as a contribution to the *Opportunity Fund Campaign*. It will be awarded on an annually rotating basis to students in the Faculty of Engineering and Applied Science (particularly Civil Engineering), the Faculty of Science (particularly Biological Sciences) and Archaeology. Successful candidates are to be of scholarship standing and preferably show an interest in environmental issues. The scholarship will be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid upon recommendation from the Dean/Director/ Department Head of the appropriate discipline.

**THE WILLIAMS SCIENCE SCHOLARSHIPS**

These scholarships valued at \$1,500.00 each are the result of an endowment started by Dr. Hank Williams. One scholarship from the fund shall be awarded to the most promising second year student entering the Earth Science Program and others, as the fund will allow, will be awarded to second year students entering the Faculty of Science. These scholarships shall be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid based on recommendations from the Head, Department of Earth Sciences and the Dean, Faculty of Science respectively. In the event that there is no acceptable candidate in Earth Sciences Department in a given year, all scholarships for that year will be awarded to students in the Faculty of Science upon recommendation of Dean.

**THE DR. JUNE G. WINTER MEMORIAL SCHOLARSHIP**

This scholarship valued at the interest on the endowment was established in memory of Dr. June G. Winter, a former member of faculty in the Department of Chemistry. The scholarship will be awarded annually to a female student in her first year of chemistry studies and will be based on the results of the Chemical Institute of Canada (CIC) National Chemistry Examination. The scholarship is tenable only by students who attended school and wrote the CIC examination in Newfoundland and Labrador. The scholarship will be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid upon recommendation of the Head, Department of Chemistry.

**THE LEE WULFF SCHOLARSHIP**

A fund was established in 1991 to honour the memory of Lee Wulff (1905-1991), a renowned American sportsman, author, conservationist and environmentalist, who spent a considerable amount of time exploring the waters, barrens and woodlands of Newfoundland, promoting its abundant wildlife resources and supporting conservation.

A single scholarship, valued at no less than \$1,500.00 will be awarded annually from this fund, to a third year Biology major wishing to pursue further studies in biological sciences, with emphasis on conservation and environment. The award will be made by the Senate Committee on Undergraduate Scholarships and Financial Aid on the recommendation of the Head of Biology and the Dean of Science and will be based on academic excellence in biological sciences and a demonstrated interest in conservation and the environment.

## 3.8 School of Human Kinetics and Recreation

The following are available to students in the School of Human Kinetics and Recreation based on the recommendation of the Director.

**THE CSEP/SCPE (CANADIAN SOCIETY FOR EXERCISE PHYSIOLOGY) UNDERGRADUATE STUDENT AWARD**

The CSEP/SCPE Undergraduate Award recognizes excellence in academic achievement among undergraduate students. It is offered in Canadian universities which offer an undergraduate degree in physical education, human kinetics, or related disciplines. It will be awarded to graduating students who achieve the highest academic standing in their undergraduate class in the scientific portion of their curriculum. It will be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid upon the recommendation of the Director, School of Human Kinetics and Recreation. One award, in the form of an engraved medallion and a certificate, is granted annually at each university.

**THE EDWARD PATRICK BROWNE MEMORIAL SCHOLARSHIPS**

In his will, Edward Browne, a distinguished and beloved member of the University community, and a life-long supporter of the growth and development of the sport of basketball at provincial and national levels, left a bequest to Memorial University of Newfoundland for the awarding of scholarships to students.

These scholarships are awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid on the advice of the Director of the School of Human Kinetics and Recreation.

**THE NITA CHAMBERS (SUTTON) AWARD**

Nita Chambers (Sutton), a graduate of Stella Maris High School in Trepassey and Memorial University of Newfoundland in St. John's, was a spirited and talented participant in basketball at both the scholastic and intercollegiate levels. This award fund has been established in Nita's memory through the fund-raising efforts of her family, friends, colleagues, team-mates, and former instructors. Valued at a portion of the annual interest, it will provide financial assistance to deserving male and female student-athletes who have graduated from high schools in Newfoundland and Labrador and who compete for the Memorial University of Newfoundland Sea-Hawks in the sport of basketball. To be eligible for this fund students will be required to maintain a minimum cumulative average of 65% within the previous academic year of study at Memorial University of Newfoundland. Funds will be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid upon the recommendation of the Director, School of Human Kinetics and Recreation in consultation with the coaches of the varsity basketball teams.

**ELIZABETH DALE NLVA SCHOLARSHIP**

This scholarship has been established by the Newfoundland and Labrador Volleyball Association (NLVA) and will be awarded annually, on the basis of scholarship standing, to a new recruit to the female volleyball program. This scholarship is renewable, for a second year, providing the recipient maintains scholarship standing and is a member of the female varsity volleyball team for both years. If an athlete receives a scholarship in her first year and does not return to the team in the following year, it is at the discretion of the coach to award the scholarship to another returning athlete. The scholarship will be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid based on a recommendation from the Director, School of Human Kinetics and Recreation acting on the advice of the team coach and the NLVA Executive.

**THE MARGARET (MAG) DAVIS MEMORIAL SCHOLARSHIP**

This scholarship has been established in memory of Margaret (Mag) Davis, former graduate of Memorial University of Newfoundland, dedicated physical education teacher and well-known athlete who excelled in the sports of softball, field hockey, ice hockey, soccer, ball hockey, curling, squash and golf. Valued at a minimum of \$500 annually, it will be awarded to a female undergraduate student studying in the programs of the School of Human Kinetics and Recreation. In awarding this scholarship, preference will be given to students who have demonstrated athletic ability and scholarship standing. The scholarship will be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid upon recommendation of the Director, School of Human Kinetics and Recreation.

**THE MARIE AND PAUL DEVLIN ATHLETICS SCHOLARSHIP**

This scholarship, valued at a portion of the annual income on the initial endowment, was established by Memorial University of Newfoundland alumnus, Dr. William Devlin. Dr. Devlin is a medical school graduate and a former varsity athlete at Memorial. In awarding this scholarship, preference will be given to undergraduate students who combine academic achievement, leadership and athletic prowess at the varsity level. This scholarship is tenable in all undergraduate programs at this University. The scholarship will be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid based on a recommendation from the Director, School of Human Kinetics and Recreation.

**THE J. DOUGLAS EATON ALUMNI SCHOLARSHIP**

This scholarship was established by the Alumni Association of Memorial University of Newfoundland to commemorate the 30th Anniversary of degree programs in the School of Human Kinetics and Recreation and to honour Dr. Eaton a former department head. The value of the scholarship will be determined by the interest accruing from the initial endowment. The scholarship shall be awarded to the student who attains the highest academic standing in the third year of the Bachelor of Physical Education, Bachelor of Recreation or Bachelor of Kinesiology. Recipients must also demonstrate commitment and service in activities related to their intended profession. The scholarship will be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid based on recommendations from the Director of the School.

**THE MATTHEW J. FOSTER ALUMNI SCHOLARSHIP**

This scholarship, established by the School of Human Kinetics and Recreation, Memorial University of Newfoundland, commemorates the 30th Anniversary awarding of the first Bachelor of Physical Education Degrees at Memorial University of Newfoundland and honours Mr. Foster (department head/director - 1964 until his retirement in 1986). They will be valued at the interest accruing from the initial endowment and awarded to the student in the second year of a program offered by the School of Human Kinetics and Recreation who attains the highest academic standing. Recipients should also have demonstrated leadership in activities related to their intended profession. The scholarship will be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid based on the recommendation from the Director of the School.

**THE DR. M.O. AND GRACE MORGAN SCHOLARSHIP IN PHYSICAL EDUCATION**

This fund is the result of an endowment to Memorial University of Newfoundland from the estate of Dr. and Mrs. Morgan. One or more scholarships, valued at a portion of the annual accrued interest, will be awarded to a Physical Education student in the first year of the Bachelor of Physical Education degree program. The recipients will have demonstrated scholarship standing as well as leadership in the professional preparation and/or services program of the School of Human Kinetics and Recreation. These Scholarships will be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid upon the recommendation of the Director, School of Human Kinetics and Recreation.

**THE NEWFOUNDLAND AND LABRADOR BASKETBALL ASSOCIATION MERIT AWARDS**

These awards, of varying amounts, have been established by the Newfoundland and Labrador Basketball Association. They shall be awarded to Memorial University of Newfoundland students who are members of one of the University's basketball teams and in good academic standing.

These awards shall be administered by the Senate Committee on Undergraduate Scholarships and Financial Aid in conjunction with the Director, School of Human Kinetics and Recreation.

**THE NEWFOUNDLAND AND LABRADOR VOLLEYBALL ASSOCIATION AWARDS**

These awards, valued at the interest accruing from the principal amount, have been established by the Newfoundland and Labrador Volleyball Association from monies contributed by supporters of volleyball including coaches and players. They shall be awarded to Memorial University of Newfoundland students, male and/or female, who are in good academic standing, displaying commitment and leadership in the game of volleyball and who are members of one of the University's varsity volleyball teams. The awards shall be administered by the Senate Committee on Undergraduate Scholarships and Financial Aid upon the recommendation of the Director, School of Human Kinetics and Recreation.

**THE NEWFOUNDLAND & LABRADOR SOCCER ASSOCIATION AWARDS**

These awards, valued at \$500.00 each have been established by the Newfoundland Soccer Association and shall be awarded to two or more Memorial University of Newfoundland students, one male and one female, who are in good academic standing, displaying commitment and leadership in the game of soccer and who are members of one of the University's soccer teams. The awards shall be administered by the Senate Committee on Undergraduate Scholarships and Financial Aid upon the recommendation of the Director, School of Human Kinetics and Recreation.

**THE SCHOOL OF HUMAN KINETICS AND RECREATION 30TH/25TH ANNIVERSARY SCHOLARSHIP**

In the calendar year 1994 the School commemorated 30 years of professional preparation in physical education/recreation and 25 years

of Atlantic University Sport (AUS) competition at Memorial University of Newfoundland by hosting Anniversary Celebrations. The Steering Committee of these Anniversary Celebrations in co-operation with the two major organizing committees of these events established a \$500.00 Scholarship to be awarded annually to the undergraduate student who combines academic achievement and athletic prowess at the varsity level. In awarding this scholarship, preference will be given to candidates who have demonstrated ability and desire to coach, and to children of either graduates of the School or of former varsity athletes. The award is made by the Senate Committee on Undergraduate Scholarships and Financial Aid on the recommendation of the Director of the School of Human Kinetics and Recreation.

#### **SCOTT MEMORIAL SCHOLARSHIP**

This scholarship, established by Winslow and Eileen Scott in memory of their late son Bradford, a former student of Memorial University of Newfoundland, is valued at not less than \$500.00. In awarding this scholarship, preference will be given to students in the Bachelor of Education Intermediate/Secondary Program who have completed the Bachelor of Physical Education or Bachelor of Physical Education (Co-operative) degree at Memorial University of Newfoundland. If a suitable candidate cannot be found in this category it will be awarded to a senior student in the Bachelor of Physical Education or Bachelor of Physical Education (Co-operative) program who is doing the teaching option. The scholarship will be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid on the basis of scholarship standing and upon a recommendation approved by the Dean, Faculty of Education and/or the Director, School of Human Kinetics and Recreation.

#### **SEA-HAWKS ATHLETICS AWARDS**

A limited number of athletic awards are available annually to returning student-athletes who exhibit leadership, achievement and athletic success. The annual number and value of awards will vary. To be eligible for these awards, candidates must be a current member of a Memorial University of Newfoundland Sea-Hawks Athletic team and will be required to attain a minimum average of 65% based on the previous academic year of study at Memorial University of Newfoundland. The School of Human Kinetics and Recreation Selection Committee may consider other criteria including financial need, service to the University and the community. These awards will be administered by the Senate Committee on Undergraduate Scholarships and Financial Aid upon the recommendation of the Director, School of Human Kinetics and recreation in consultation with the coaches of varsity teams.

#### **THE HAROLD SQUIRES SCHOLARSHIP**

This scholarship, valued at a portion of the annual interest, was established by Memorial University of Newfoundland Alumnus and long-time employee Harold Squires. In awarding this scholarship preference will be given to a student who competes for the Memorial University of Newfoundland Sea-Hawks in the sport of basketball. Based on scholarship standing it will be awarded by the Senate committee on Undergraduate Scholarships and Financial Aid upon the recommendation of the Director, School of Human Kinetics and Recreation in consultation with the coaches of the varsity basketball teams.

#### **THE ST. JOHN'S ASSOCIATION OF BASKETBALL OFFICIALS SCHOLARSHIP**

From a sum of money donated by the St. John's Association of Basketball Officials a scholarship valued at the annual interest accruing on the initial endowment is to be awarded annually to a full-time Memorial University of Newfoundland student who is an active member of the University basketball community. Scholarship standing as defined by the University is a requirement in the selection of a suitable candidate. The award is to be made by the Senate Committee on Undergraduate Scholarships and Financial Aid on the recommendation of the executive of the St. John's Association of Basketball Officials.

#### **THE SWIMMING NEWFOUNDLAND AND LABRADOR BURSARY**

This bursary, valued at \$1,000.00 annually, is available to a student continuing beyond their first year of studies at Memorial University of Newfoundland. The bursary recipient will be a swimmer in good standing with Swimming Newfoundland and Labrador and will be a returning member to the Memorial University of Newfoundland Seahawks Varsity Swim Team. Awarding of this bursary will be based on swimming performance at the varsity level. It will be awarded to a student in good academic standing at the University. Applications may be obtained in writing to the Swimming Newfoundland and Labrador Office, RPO MacDonald Drive, Box 21248, St. John's, NL, A1A 5B2 or by telephone to (709) 576-7946 or fax: to (709) 576-7493.

#### **LORNE WOOLRIDGE NLVA SCHOLARSHIP**

This scholarship has been established by the Newfoundland and Labrador Volleyball Association (NLVA) and will be awarded annually, on the basis of scholarship standing, to a new recruit to the men's volleyball program. This scholarship is renewable, for a second year, providing the recipient maintains scholarship standing and is a member of the men's varsity volleyball team for both years. If an athlete receives a scholarship in his first year and does not return to the team in the following year, it is at the discretion of the coach to award the scholarship to another returning athlete. The scholarship will be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid based on a recommendation from the Director, School of Human Kinetics and Recreation acting on the advice of the team coach and the NLVA Executive.

### **3.9 School of Music**

The following are available to students in the School of Music based on a recommendation from the Director.

#### **THE JAMES E. AUSTIN MEMORIAL SCHOLARSHIP**

From a sum of money donated by the firm of Dicks & Co. Limited, a scholarship has been established in honour of the late James E. Austin, former Chairman of the Board of the Company. The scholarship, valued at \$500.00, is to be awarded annually on the basis of academic excellence to a full-time student enrolled in the School of Music at Memorial University of Newfoundland who is entering the fifth semester of the Conjoint Degree program. The scholarship will be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid, acting on the recommendation of the Director, School of Music.

#### **DR. ANDREAS BARBAN MEMORIAL SCHOLARSHIP**

This Scholarship was established in memory of Dr. Andreas Barban, distinguished musician and scholar, and former instructor in the School of Music. The scholarship, valued at not less than \$1,000.00 will be awarded to a full-time Bachelor of Music student beyond the first year whose principal applied study is piano, and who has demonstrated musical potential and academic excellence. The award is made by the Senate Committee on Undergraduate Scholarships and Financial Aid on the recommendation of the Director, School of Music.

#### **THE JONAS (JOE) BARTER SCHOLARSHIP IN MUSIC**

This scholarship, valued at \$500.00, is awarded annually from the income derived from a trust fund given to the University by the family and friends of the late Jonas (Joe) Barter. It is to be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid on the basis of academic excellence, based on the advice of the Director, School of Music. Preference will be given to a student who has completed three years of study in the area of Music Composition.

#### **THE YVONNE BELANGER MEMORIAL BURSARY**

This fund was established by her family to cherish the memory of musician, teacher and mother, Yvonne Belanger. The bursary will be awarded annually to full-time Bachelor of Music students beyond first year from the interest accrued on this endowment. The award is made by the Senate Committee on Undergraduate Scholarships and Financial Aid on the recommendation of the Director, School of

Music with the criteria for eligibility being musically, musical achievement, financial need, and scholarship standing.

#### **THE AMANDA BISHOP MEMORIAL SCHOLARSHIP**

This fund was established by the family of Amanda Bishop to cherish the memory of a loving and caring daughter and sister whose life-long ambition was to study voice in preparation for a career in the performing arts. With a value of at least \$500.00, this scholarship will be awarded annually to a student beyond the first year of the music degree program in good academic standing, whose performance medium is voice and who has demonstrated dedicated commitment to the betterment of the music community. The award will be made by the Senate Committee on Undergraduate Scholarships and Financial Aid on the recommendation of the Director, School of Music.

#### **THE CHARLES J. BOWN MEMORIAL ENTRANCE SCHOLARSHIP IN MUSIC**

This scholarship was established in 2001 in memory of Charles J. Bown (1963-2000) who graduated from Memorial University of Newfoundland in 1985 with a Bachelor of Music and Music Education. He went on to obtain his Master's degree in vocal performance from the University of Ottawa in 1994. He was actively involved in music as an educator, choir director, soloist and organist until his death on October 24, 2000. Valued at the annual interest on the endowment, the scholarship will be awarded to a student entering the Bachelor of Music program at Memorial University of Newfoundland who has demonstrated musical potential, academic ability and financial need. Preference will be given to a student whose major applied study is in voice. It will be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid on the recommendation of the Director, School of Music.

#### **THE DENNIS G. BROWNE MEMORIAL SCHOLARSHIP**

This scholarship, valued at the accrued interest on an endowment, established by the firm of Patterson Palmer Hunt Murphy, in memory of the late Dennis G. Browne, who was a member of their law firm; will be awarded to a student enrolled beyond first year in the Bachelor of Music program. The scholarship will be awarded on the basis of scholarship standing and demonstrated musical potential. The award will be made by the Senate Committee on Undergraduate Scholarships and Financial Aid on the recommendation of the Director, School of Music.

#### **THE CANADIAN BROADCASTING CORPORATION (NEWFOUNDLAND & LABRADOR REGION) ENTRANCE SCHOLARSHIP IN MUSIC**

This scholarship, valued at not less than \$500.00, is to be awarded annually from a sum of money donated by the Canadian Broadcasting Corporation (Newfoundland and Labrador Region). The scholarship will be awarded on the basis of academic standing and demonstrated music potential, to a student from Newfoundland and Labrador entering the first semester of full-time study toward the Bachelor of Music degree. The award will be made by the Senate Committee on Undergraduate Scholarships and Financial Aid on the recommendation of the Director, School of Music.

#### **THE DR. G. ALBERT COOPER BURSARY**

This bursary, valued at the accrued interest on an initial endowment, is awarded annually to a full-time Bachelor of Music student beyond second year who has demonstrated academic excellence, musical potential and need. The bursary will be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid acting on the recommendation of the Director, School of Music.

#### **THE CORNER BROOK PULP AND PAPER LIMITED SCHOLARSHIP IN MUSIC**

This award, the gift of The Corner Brook Pulp and Paper Limited, is valued at \$250.00. It will be awarded annually to a student enrolled in full-time studies in the School of Music at Memorial University of Newfoundland. The scholarship will be awarded on the basis of academic excellence and demonstrated musical potential by the Senate Committee on Undergraduate Scholarships and Financial Aid acting on the advice of the Director, School of Music.

#### **THE FREDERICK AND ISABEL EMERSON MEMORIAL SCHOLARSHIP**

This scholarship has been established in memory of Frederick and Isabel Emerson by their children. Mr. Emerson, lawyer, musician, and a former lecturer and member of the Board of Regents, was involved in setting up and teaching music classes in the early days of the Memorial University College. The scholarship, valued at not less than \$500.00, is awarded annually to a full-time music degree student beyond the second semester. Selection of candidates will be made on the basis of academic standing, financial need and character. The award is made by the Senate Committee on Undergraduate Scholarships and Financial Aid on the recommendation of the Director, School of Music.

#### **THE ED GOFF MEMORIAL SCHOLARSHIP**

This scholarship valued at a minimum of \$2,500.00 is to be awarded to a student in any year in the Bachelor of Music degree program who shows musical potential and has scholarship standing. Preference will be given to a student whose principle applied study is saxophone. It may be renewed for the duration of the student's program, up to a maximum of four years, if he or she continues to excel musically and maintain scholarship standing. The scholarship will be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid on the recommendation of the Director, School of Music.

#### **THE GOWER YOUTH BAND ENTRANCE SCHOLARSHIP IN MUSIC**

This scholarship, in the value of at least \$500.00, is sponsored by The Gower Youth Band in honour of former members who have become professional musicians and music educators. The scholarship is open to all students in brass, woodwind or percussion entering the first year of full-time study in the School of Music, and is awarded on the basis of musical excellence and potential as demonstrated at the entrance audition. This award is made by the Senate Committee on Undergraduate Scholarships and Financial Aid on the recommendation of the Director, School of Music.

#### **THE BEN HEPPNER 25th ANNIVERSARY SCHOLARSHIP IN MUSIC**

This scholarship was established through the generosity of Canadian tenor, Ben Heppner, who donated his fee for a recital given on the occasion of the 25th anniversary of the founding of the School of Music. Proceeds from the concert were matched by the *Opportunity Fund* to endow the scholarship. Valued at a portion of the annual interest on the endowment, it will be awarded annually to a student in the Bachelor of Music degree program on the basis of musical and academic excellence. The scholarship will be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid on the recommendation of the Director, School of Music.

#### **THE WINNIFRED HOLLOWAY MEMORIAL SCHOLARSHIP**

This scholarship is the result of a bequest left to the University by Mrs. Velda Richards of St. John's. The scholarship, valued at approximately \$1,000.00, will be awarded annually to a female student who is full-time in the Bachelor of Music program and who is beyond first year. The scholarship will be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid on the recommendation of the Director, School of Music on the basis of musical talent, financial need, and scholarship standing.

#### **THE WILLIAM J. HOUSE MEMORIAL SCHOLARSHIP**

This scholarship, valued at a minimum of \$1000.00, has been established in memory of William J. House by his widow, Mrs. Daphne L. House. The scholarship is to be awarded annually by the Senate Committee on Undergraduate Scholarships and Financial Aid on the recommendation of the Director of the School of Music, to a full-time organ student from Newfoundland and Labrador who shows promise and purpose of continuing in that field.

#### **THE HOWSE OF FLOWERS MUSIC SCHOLARSHIP**

This scholarship, valued at not less than \$500.00, is awarded annually to a full-time music degree student beyond the second semester

who has demonstrated academic excellence and musical potential. The award is made by the Senate Committee on Undergraduate Scholarships and Financial Aid acting on the recommendation of the Director, School of Music.

**THE IMPERIAL TOBACCO CANADA ENTRANCE SCHOLARSHIP IN MUSIC**

This scholarship, established in 1998 by Imperial Tobacco Canada in support of the *Opportunity Fund* Campaign, has a minimum value of \$2,000.00 annually. It will be awarded on the basis of scholarship standing and demonstrated music potential, to a student entering the first semester of full-time study toward the Bachelor of Music degree at Memorial University of Newfoundland. It will be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid upon the recommendation of the Director, School of Music.

**THE KIWANIS CLUB OF ST. JOHN'S MUSIC SCHOLARSHIP/BURSARY**

This scholarship/bursary, valued at \$500.00, is awarded annually by the Senate Committee on Undergraduate Scholarships and Financial Aid on the recommendation of the Director, School of Music, to a promising student who is continuing studies in music at this University. Selection of candidates will be made on the basis of financial need, academic standing and character. The scholarship/bursary is not restricted to any particular year of study.

**THE DAME VERA LYNN SCHOLARSHIP IN MUSIC**

This scholarship, valued at a maximum of \$2500.00 over five years (\$500.00 per year), was established to honour Dr. Vera Lynn, the distinguished musician and honorary graduate of Memorial University of Newfoundland. It is open to all students entering the first year of full-time study in the School of Music and is awarded on the basis of academic standing and musical potential as demonstrated at the entrance audition. The recipient must maintain scholarship standing to retain the scholarship. A relinquished scholarship may be re-awarded at the discretion of the Director, School of Music. This award is made by the Senate Committee on Undergraduate Scholarships and Financial Aid on the recommendation of the Director, School of Music. Application forms may be obtained from the School.

**THE R.F. (BOB) MACLEOD MEMORIAL ENTRANCE SCHOLARSHIP IN MUSIC**

This scholarship, with a value of at least \$300.00, has been established in memory of Mr. R.F. (Bob) MacLeod, pianist, organist, and entertainer. The scholarship is awarded annually to a student entering the first year of full-time study toward the Bachelor of Music degree. In making the award preference will be given to a student from rural Newfoundland and Labrador. Academic standing, character and financial need will be considered. The award is to be made by the Senate Committee on Undergraduate Scholarships and Financial Aid acting on the advice of the Director, School of Music.

**THE MARQUIS LIMITED (COLONEL SANDERS) BURSARY IN MUSIC**

This fund was established to provide financial assistance to students from Newfoundland and Labrador whose permanent residence is outside the St. John's metropolitan area, and who are entering the first year of full-time study in the School of Music. The number of awards given annually and the value of each shall be determined by the Director, School of Music. The award(s) is made by the Senate Committee on Undergraduate Scholarships and Financial Aid on the recommendation of the Director, School of Music.

**THE DAVID MCCURDY MEMORIAL BURSARY**

This bursary, established by the family and friends of the late David McCurdy, a former student of this University, is valued at \$300.00 and is awarded annually to a student enrolled in the School of Music. In making the award, interest and ability in Music, as well as financial need, will be considered. The award will be made by the Senate Committee on Undergraduate Scholarships and Financial Aid on the recommendation of the Director, School of Music.

**THE JOAN McNAMARA FURLONG AWARD**

This scholarship, awarded annually in memory of Mrs. Joan McNamara Furlong, is provided from the interest accumulated on a continuing endowment given for this purpose by her family. At the request of the sponsors it will be awarded to a second- or third-year student in voice who shows definite promise and purpose of continuing in that field, and of making a cultural contribution to the community. The scholarship will be utilized by the successful candidate to further studies in voice at Memorial University of Newfoundland. The award will be made by the Senate Committee on Undergraduate Scholarships and Financial Aid on the recommendation of the Director, School of Music.

**THE KAREN KEIRSTEAD MILLS MEMORIAL SCHOLARSHIP IN MUSIC**

This scholarship was established in 1991 in memory of Karen Keirstead Mills, a former organ student and voice instructor in the School of Music. The scholarship, valued at not less than \$1,000.00, will be awarded to a full-time Bachelor of Music student who is normally beyond the first year and who has demonstrated musical potential and academic ability. Preference will be given to a student whose major applied study is in voice or organ. The award is made by the Senate Committee on Undergraduate Scholarships and Financial Aid on the recommendation of the Director, School of Music.

**THE DOROTHY DUFF MOORES MEMORIAL ENTRANCE SCHOLARSHIP IN MUSIC**

This scholarship in memory of Dorothy Duff Moores, a lover and supporter of music, is provided from the interest accumulating on an endowment given for this purpose by her son Frank D. Moores and family friends. Valued at not less than \$1,000.00, it is awarded annually to a student of outstanding academic and musical ability who is entering the first semester of full-time study towards the Bachelor of Music degree. The award will be made by the Senate Committee on Undergraduate Scholarships and Financial Aid on the recommendation of the Director, School of Music.

**MRS. GRACE MORGAN SCHOLARSHIP IN MUSIC**

This fund was established in 1982 by faculty members of the School of Music in recognition of the interest and support given by Mrs. Grace Morgan to music at Memorial University of Newfoundland. Further funding resulted from a bequest to the University by Dr. M.O. Morgan after his death in 1995. Four scholarships, each valued at not less than \$2,500.00, will be awarded annually from the income derived from the fund. Two scholarships will be awarded to students entering the first semester of full-time study toward the Bachelor of Music degree, and two scholarships will be awarded to students beyond the first year of the music degree program. In making the awards, academic standing and musical potential will be considered. Whenever possible, at least one of the awards will be given to a student in piano and at least one of the awards will be given to a student in organ. The awards will be made by the Senate Committee on Undergraduate Scholarships and Financial Aid on the recommendation of the Director, School of Music.

**THE MUSIC INDUSTRIES ASSOCIATION OF NEWFOUNDLAND AND LABRADOR ENTRANCE SCHOLARSHIP**

Memorial University of Newfoundland is the beneficiary of a \$3,000.00 scholarship as a result of funds donated by NewCap Inc. to develop and promote talent for the Newfoundland Music Industry. This scholarship is available to a full-time student who has applied and been accepted to Memorial University of Newfoundland's School of Music. The successful student must have been born in Newfoundland and Labrador or have lived here for a minimum of 12 months prior to commencement of studies at the School of Music. The scholarship selection will be juried by the School of Music. Upon recommendation of the Director, School of Music in consultation with the Board of Directors of the Music Industry Association of Newfoundland and Labrador, the Scholarship will be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid.

**SCHOOL OF MUSIC FACULTY SCHOLARSHIP/BURSARY FUND**

These scholarships/bursaries of the value of at least \$300.00 each are awarded out of income derived from a fund established in 1976 by the faculty members of the School of Music. The awards are made annually by the Senate Committee on Undergraduate

Scholarships and Financial Aid on the recommendation of the Director, School of Music, to promising students who are continuing their studies in Music at this University. Selection of candidates will be on the basis of musicianship, academic standing, financial need and participation in School of Music activities.

**THE ARTHUR AND DOROTHY NOSEWORTHY ENTRANCE SCHOLARSHIP IN MUSIC**

This scholarship, valued at not less than \$1,000.00, is to be awarded annually from the interest accruing from an endowment fund established by the Noseworthy family in honour of their parents. The scholarship will be awarded on the basis of academic excellence and demonstrated musical potential to a student entering the first semester of full-time study toward the Bachelor of Music degree. Preference will be given to a student whose principal instrument is organ. The award is made by the Senate Committee on Undergraduate Scholarships and Financial Aid on the recommendation of the Director, School of Music.

**THE DR. G. B. OLSON SCHOLARSHIP**

This scholarship, valued at \$500, was established by Dr. G. B. Olson, who was a Henrietta Harvey Visiting Professor in the School of Music in 1983-84. It is to be given to a student entering the first year of the Bachelor of Music program.

Preference will be given to a student from Newfoundland and Labrador whose principal applied study is in woodwind, brass or percussion. The award is made by the Senate Committee on Undergraduate Scholarships and Financial Aid on the recommendation of the Director of the School of Music.

**THE DR. HUGH O'NEILL PRIZE IN PIANO**

This prize is the result of a generous donation to Memorial University of Newfoundland by The O'Neill Foundation. One prize valued at \$500.00 will be awarded annually to the top graduating undergraduate student in the School of Music, who majored in piano. It will be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid upon the recommendation of the Director, School of Music.

**THE DR. HUGH O'NEILL PRIZE IN VIOLIN**

This prize is the result of a generous donation to Memorial University of Newfoundland by The O'Neill Foundation. One prize valued at \$500.00 will be awarded annually to the top graduating undergraduate student in the School of Music, who majored in violin. It will be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid upon the recommendation of the Director, School of Music.

**THE FREDERICK A. PARKER MEMORIAL SCHOLARSHIP IN MUSIC THEORY/COMPOSITION**

This scholarship, valued at \$400.00, was established by Professor Michael Parker in memory of his father, Frederick A. Parker. It is awarded annually to a student beyond first year for excellence in theory/ composition. Preference will be given for originality in composition.

**REX E. ROOD MEMORIAL SCHOLARSHIP**

This scholarship has been established in memory of Rex E. Rood by his wife and daughter. Although not a musician or performer, Mr Rood had a deep love and knowledge of classical music which he shared with his family and which formed an integral part of his life. He enjoyed orchestral arrangements, choral works and solo voices, but was particular fond of operatic tenors.

This scholarship, valued at \$2000.00 per year, is to be awarded to a student in any year of the Bachelor of Music degree program who demonstrates musical potential and academic excellence. Preference will be given to a student whose principal applied study is voice, in particular a tenor, bass or baritone. The award may be renewed for the duration of the student's program, up to a maximum of five years, if the recipient continues to excel musically and maintains scholarship standing. The scholarship will be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid, on the recommendation of the Director, School of Music.

**THE DR. IGNATIUS A. RUMBOLT SCHOLARSHIP IN MUSIC**

This Scholarship, valued at not less than \$1,000.00, was established in memory of Dr. Ignatius A. Rumbolt, distinguished musician, music educator, builder of the choral tradition in Newfoundland and Labrador, and honorary graduate of Memorial University of Newfoundland. The scholarship is awarded to a student beyond first year in the Bachelor of Music degree program who has demonstrated academic excellence and musical potential. The award is made by the Senate Committee on Undergraduate Scholarships and Financial Aid on the recommendation of the Director, School of Music.

**THE SERGEANTS MESS OF NEWFOUNDLAND MEMORIAL ENTRANCE SCHOLARSHIP IN MUSIC**

From the revenue accruing from War Savings Bonds purchased in 1940 by the Sergeants Mess of Newfoundland, a fund was established in 1990 to provide an annual scholarship of not less than \$500.00 to a student entering the first semester of full-time study in the School of Music. Academic excellence and musical potential as demonstrated at the entrance audition will be considered. The award is made by the Senate Committee on Undergraduate Scholarships and Financial Aid on the recommendation of the Director, School of Music.

**THE GRACE M. SPARKES ALUMNI ENTRANCE SCHOLARSHIP/BURSARY IN MUSIC**

The Memorial University of Newfoundland Alumni Association has established, from its Alumni Annual Fund, an entrance scholarship/ bursary in Music. The award, valued at not less than \$500.00, will be given annually to a student entering the first semester of fulltime study towards the Bachelor of Music degree. Academic standing, musical potential and financial need will be considered. The award will be made by the Senate Committee on Undergraduate Scholarships and Financial Aid on the recommendation of the Director, School of Music.

**THE GRACE M. SPARKES SCHOLARSHIP IN MUSIC**

This scholarship was established by Mrs. Sparkes, former Alumni of the year and devoted friend of Memorial University of Newfoundland. Valued at approximately \$500.00, it will be given annually to an undergraduate student in full-time study towards the Bachelor of Music degree. Scholarship standing and musical potential will be the main considerations in awarding this scholarship. It will be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid on the recommendation of the Director, School of Music.

**THE GORDON M. STIRLING MEMORIAL SCHOLARSHIP/BURSARY**

This fund was established by the Stirling Ryan law firm in memory of their late senior partner Gordon M. Stirling. The award will be made by the Senate Committee on Undergraduate Scholarships and Financial Aid based upon the recommendation of the Director, School of Music. The award will be available to an exceptional student(s) enrolled in the School of Music to assist with travel and other expenses to enable such student(s) to perform at events of major musical importance outside the province. Scholarship standing, musical ability, financial need, and the benefits such exposure would confer on the student(s) will be taken into consideration by the Committee. The value of the award will be based on the interest income accruing on the capital sum in the fund.

**THE MARY C. WHITELEY ENTRANCE SCHOLARSHIP IN MUSIC**

This scholarship is awarded annually to a student entering first year in the School of Music at Memorial University of Newfoundland. It is awarded on the basis of scholarship standing and musical potential as demonstrated in the entrance audition. The value of this scholarship is determined by the amount of interest accrued on the principle sum. The scholarship is awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid on the recommendation of the Director, School of Music.

**THE MRS. H.B. YOUNG MEMORIAL SCHOLARSHIP**

This scholarship has been established by Mrs. Helen Marquis in memory of her mother, Mrs. H.B. Young, and is awarded annually to a full-time student at the School of Music. The value of the award will be based on the income accruing from the fund during the period of tenure of the scholarship. In selecting candidates, academic achievement, financial need and character will be taken into consideration. The award will be made by the Senate Committee on Undergraduate Scholarships and Financial Aid on the recommendation of the Director, School of Music.

**3.10 School of Nursing**

The following are available to students in the School of Nursing based on a recommendation from the Director.

**THE ALCOHOL AND DRUG DEPENDENCY COMMISSION COMMEMORATIVE AWARDS**

These awards have been established to commemorate the Alcohol and Drug Dependency Commission (1982-1992). In an effort to promote the pursuit of addictions studies in various disciplines, it is hoped that recipients will pursue careers in addiction-related fields. Up to three awards, valued at \$750.00 each, are available annually and open to students who have completed a major or published paper at the undergraduate or graduate level or are completing an Honors Dissertation on addictions issues. It will be awarded on a rotating basis to students in Pharmacy, Nursing, Medicine, and Social Work with a Faculty of School receiving only one award in any given scholarship year. These awards will be granted by the Senate Committee on Undergraduate Scholarships and Financial Aid upon recommendation of the Dean/Director/Head of the respective Faculty or School.

**THE KATHLEEN M. BAIRD MEMORIAL SCHOLARSHIP**

This scholarship is made possible through a fund established by Mrs. Edna Baird-Stephenson in memory of her sister Kathleen M. Baird (1903-1985). The scholarship will be valued at the annual accrued interest on the endowment and awarded annually to a student in the second year of the Bachelor of Nursing (Collaborative) Program on the basis of scholarship standing and financial need. It will be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid upon the recommendation of the Director, School of Nursing.

**THE ELEANOR AND NORVAL BLAIR TRAVEL SCHOLARSHIP IN NURSING**

This scholarship is made possible through a donation to the *Opportunity Fund* Campaign in 1998 by Mr. and Mrs. Blair. The scholarship, valued at the annual accrued interest on the endowment, shall take the form of a travel grant to a student in the Bachelor of Nursing (Collaborative) program at the Memorial University of Newfoundland School of Nursing site who has demonstrated excellence in nursing practice. The recipient will be a student in the third or fourth year of the program who will pursue each of the clinical practicum courses in the given semester. First preference will be given to those students going outside the province of Newfoundland and Labrador to complete their clinical. The scholarship will be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid on the basis of scholarship standing and a recommendation from the Director, School of Nursing.

**THE BARBARA FOWLOW MEMORIAL SCHOLARSHIP**

This scholarship is made possible by a fund established by friends and colleagues in memory of Barbara Fowlow, a graduate of Memorial University of Newfoundland's School of Nursing. Valued at the annual interest on the initial endowment, it is awarded annually to a student who is entering the final year of the Bachelor of Nursing (Collaborative) Program. Preference in awarding the scholarship will go to students who have shown an interest in Cardiovascular Nursing and/or been involved in student life through volunteer work, involvement in Student Societies etc., during their university years, particularly within the School of Nursing. The scholarship will be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid on the basis of scholarship standing and a recommendation from the Director, School of Nursing.

**GLENDINNING AND MILLER FAMILY SCHOLARSHIP IN NURSING**

This scholarship was established by Jane Carol Glendinning-Johnson, Andrea (Glendinning) Sumsion, and Barbara (Glendinning) Smith to honor and remember Andrew and Jane (Bethune) Glendinning and Hugh and Barbara (Green) Miller, their respective offspring and other family members, and to recognize their belief in the value of education which has carried down to the present generation. This scholarship, valued at a portion of the accrued interest on an initial endowment, will be awarded annually to a student registered full-time in the Bachelor of Nursing (Collaborative) Program at Memorial University of Newfoundland. It will be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid on the basis of scholarship standing and a recommendation from the Director, School of Nursing.

**THE MIRDZA KAJAKS SCHOLARSHIP**

This scholarship, established by Mirdza Kajaks, is valued at a portion of the accrued interest on the endowment. It will be awarded annually to a full-time student entering the first year of the Bachelor of Nursing (Collaborative) Program at the Western Regional School of Nursing. It is the wish of Mrs. Kajaks that the recipient plans to practice in Newfoundland and Labrador upon completion of studies. Whenever possible such students will be given first preference. This scholarship will be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid on the basis of scholarship standing and a recommendation from the Director, School of Nursing.

**THE MARILYN MARSH SCHOLARSHIP**

This scholarship is made possible by a fund established by former students and colleagues of Marilyn Marsh on the occasion of the Twenty-Fifth Anniversary of the School of Nursing. The scholarship is awarded annually to a student who has completed the second year of the Bachelor of Nursing (Collaborative) Program at the Memorial University of Newfoundland site. Criteria (in order of priority) for this award are:

- Demonstrated clinical excellence
- Participation in student/school activities
- Academic standing

The award is made by the Senate Committee on Undergraduate Scholarships and Financial Aid, acting on the recommendation of the Director of the School of Nursing.

**THE JOHN M. AND ELSA S. MORGAN SCHOLARSHIPS**

These scholarships have been bequested to the University by the late Dr. John M. Morgan, B.Sc., M.D., and have been named to commemorate Dr. Morgan and his wife Elsa. Up to twenty-five scholarships will be made available annually to undergraduate students who have completed at least one year of studies at Memorial University of Newfoundland within the areas specified below and who will be continuing in these programs. The scholarships, valued at a minimum of \$1,000.00 each, will be disbursed as follows:

- Five to the Faculty of Medicine
- Four to the School of Nursing
- Four to the Faculty of Education
- Four to the Department of Philosophy
- Four to the Department of Anthropology
- Two to the Department of Religious Studies (with preference to students of comparative religions)

- Two to students in Newfoundland Studies

The scholarships will be made on the basis of scholarship standing. Preference will be given, where possible, to students from the Port-de-Grave District.

#### **THE MARGARET FITZPATRICK MORGAN SCHOLARSHIP IN NURSING**

This fund was established by the late Dr. M.O. Morgan in memory of his wife, the late Margaret Fitzpatrick Morgan. One or more scholarships valued at not less than \$2,500.00 each will be awarded annually by the Senate Committee on Undergraduate Scholarships and Financial Aid to a student or students registered full-time in the Bachelor of Nursing (Collaborative) Program. Preference will be given to students entering the first year of the program preferably from rural Newfoundland and Labrador.

#### **THE ELIZABETH LINDSAY ROBBINS SCHOLARSHIP IN NURSING**

This scholarship was created by Elizabeth (Betty) L. Robbins who was born on May 15, 1911 in Strathaven, Lanarkshire County, Scotland. Betty graduated in Nursing from Stobhill General Hospital, Glasgow, Scotland on October 31, 1940 and received a Certificate from the Central Midwives Board for Glasgow on December 13, 1940. She came to Newfoundland on Jan 20, 1947 and married Frederick Robbins in St. John's on March 1, 1947. Mr. Robbins was a Newfoundland war veteran from Burlington, Notre Dame Bay, who had served with the Royal Navy during the Second World War.

This scholarship, valued at a portion of the annual accrued interest on an endowment (a minimum of \$2,500.00 annually), will be awarded to a student in the third year of the Bachelor of Nursing (Collaborative) Program. The scholarship will be awarded on the basis of scholarship standing, financial need, and nursing professional practice. It will be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid upon the recommendation of the Director, School of Nursing.

#### **THE KATHARINE ROBERTS MEMORIAL SCHOLARSHIP**

This Katharine Roberts Memorial Scholarship has been endowed by Edward and Douglas Roberts in memory of their mother Katharine. The scholarship is valued at \$4,500.00 a year, and will be awarded annually to a student in any year of the Bachelor of Nursing (Collaborative) Program.

The first preference in awarding the scholarship will be given to Bachelor of Nursing (Collaborative) Program students from the electoral Districts of The Straits and White Bay North, Lake Melville and Cartwright-L'Anse au Clair (or other Districts embracing the communities in those Districts, which were established by the House of Assembly in 1995). If no suitable candidate comes forward from one of these Districts in any given year, the scholarship may be awarded to a Nursing student from a rural community elsewhere in Newfoundland and Labrador.

The scholarship will be awarded on the basis of scholarship standing, but in the case of a tie between two equally deserving students, financial need may be used as a determining factor. The scholarship will be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid upon the recommendation of the Director, School of Nursing.

#### **THE ST. JOHN'S HOME CARE SCHOLARSHIP FOR EXCELLENCE IN COMMUNITY HEALTH NURSING**

This scholarship valued at the annual accrued interest on the initial endowment will be awarded to a full-time or part-time student enrolled in the Bachelor of Nursing (Post RN) or Master of Nursing Program at Memorial University of Newfoundland with preference given to candidates enrolled in the Bachelor of Nursing (Post-RN) Program. Candidates must also have employment experience in community health nursing and demonstrated recent voluntary involvement in a community organization(s). Minimum academic requirements are a 75% overall average in either the completed diploma program in nursing or completed courses in either the BN (Post-RN) or Masters Program. In the case of undergraduates the scholarship will be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid. In the case of Graduates the scholarship will be awarded by the Dean of Graduate Studies. In both instances the award will be based upon a recommendation from the Director, School of Nursing.

#### **THE SYBIL GERTRUDE RUSTED TOY MEMORIAL BURSARY**

This bursary, established by Dr. Nigel Rusted in memory of his sister Sybil, is valued at a portion of the accrued interest on an endowment. Sybil, the daughter of Rev. Canon Ernest and Faith (Hollands) Rusted, was born in Upper Island Cove April 2, 1911. She was educated at schools in Upper Island Cove, Carbonear, Girl's College in New York and the Royal Victoria Hospital in Montreal. The bursary will be awarded annually to a student entering the first year of the Bachelor of Nursing (Collaborative) Program with first preference to students from the Conception Bay North area, who have demonstrated ability and financial need. It will be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid upon the recommendation of the Director, School of Nursing.

#### **THE JANET P. WINSOR BURSARY**

This bursary, valued at a portion of the accrued interest on the initial endowment, is awarded annually to third year students enrolled in the BN (Collaborative) Program who demonstrate financial need over and above academic excellence. The candidates must have scholarship standing as well as demonstrate financial need. At least one bursary will be awarded in each of the three sites. The criteria for this award includes excellence in Year 3 clinical courses (Nursing 3501 and 3511) supported by a letter of recommendation from clinical instructors. The student's file may also be used to determine examples of clinical excellence. Each Committee on Undergraduate Studies will select the student at their site. This bursary will be awarded at the Graduation and Awards Ceremony in the Spring, but not necessarily to the highest academic student. It will be awarded by the Senate Committee on Undergraduate scholarships and Financial Aid upon recommendation from the Director, School of Nursing.

### **3.11 School of Pharmacy**

The following are available to students in the School of Pharmacy based on a recommendation from the Director.

#### **THE ABBOTT PRIZE**

Abbott Laboratories Limited awards an annual prize consisting of \$250. This prize is awarded to a student of high academic merit. The award will be made by the Senate Committee on Undergraduate Scholarships and Financial Aid on the Recommendation of the Director, School of Pharmacy.

#### **THE ALCOHOL AND DRUG DEPENDENCY COMMISSION COMMEMORATIVE AWARDS**

These awards have been established to commemorate the Alcohol and Drug Dependency Commission (1982-1992). In an effort to promote the pursuit of addictions studies in various disciplines, it is hoped that recipients will pursue careers in addiction-related fields. Up to three awards, valued at \$750.00 each, are available annually and open to students who have completed a major or published paper at the undergraduate or graduate level or are completing an Honors Dissertation on addictions issues. It will be awarded on a rotating basis to students in Pharmacy, Nursing, Medicine, and Social Work with a Faculty of School receiving only one award in any given scholarship year. These awards will be granted by the Senate Committee on Undergraduate Scholarships and Financial Aid on the recommendation of the Dean/Director/Head of the respective Faculty or School.

#### **THE APOTEX INC. "FUTURE LEADER" AWARD**

This award, valued at \$1,000.00 will be provided annually to a graduating student. The award is in recognition of a significant leadership role in organizations and associations of the undergraduate student body of the school as well as in recognition of the likelihood of noteworthy future contribution to the profession. In addition, the candidate should have consistently maintained a good academic



standing throughout his/her undergraduate program. The award will be made by the Senate Committee on Undergraduate Scholarships and Financial Aid on the recommendation of the Director, School of Pharmacy.

#### **THE APOTEX INC. SCHOLARSHIP/ BURSARIES**

Apotex Incorporated provides two awards annually in the amount of \$750 each. The first is provided to a student who has completed year I of the Pharmacy program with a high level of academic excellence, as judged by the faculty, and who intends to proceed to year II. The second is provided to the student who achieves the highest standing in Pharmacy 2201 - Pharmaceutics I during Pharmacy year I. This scholarship will be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid based on a recommendation from the Director, School of Pharmacy.

#### **THE AVENTIS PHARMA SCHOLARSHIPS**

Aventis Pharma offers annually two scholarships in the amount of \$750.00 each to deserving students entering the first year of the Pharmacy program. The selection will be based on academic achievement and admission requirements. These scholarships will be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid based on the recommendation of the Director, School of Pharmacy.

#### **THE BOEHRINGER INGELHEIM (CANADA) LTD. PHARMACY AWARD**

Boehringer Ingelheim (Canada) Ltd. offers annually two scholarships in the amount of \$1,000.00 each to students entering the first year of the program. Selection for the Boehringer Ingelheim scholarship will be based on academic achievement and admission requirements. These scholarships will be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid on the recommendation of the Director, School of Pharmacy.

#### **CANADIAN PHARMACISTS ASSOCIATION (CPHA) CENTENNIAL AWARD**

This award offered by the Canadian Pharmacists Association consists of a \$300.00 cash prize and a travel tour of approximately one week to visit manufacturing laboratories and health facilities in Toronto, Montreal or Ottawa and to attend the annual conference of the Association. It is made to a student who is completing the second year of the Pharmacy program. The award will be made by the Senate Committee on Undergraduate Scholarships and Financial Aid on the recommendation of the Director, School of Pharmacy.

#### **THE DRUG STORE PHARMACY (DOMINION) BURSARIES**

The Pharmacy division of Dominion Canada has established two bursaries of \$500.00 each. These bursaries are provided to two deserving students who have demonstrated significant financial need. These bursaries will be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid based on a recommendation from the Director, School of Pharmacy.

#### **THE G.R. DUNCAN PRIZE IN PHARMACY**

This award of \$100.00 is to be given annually to a student in any year of the pharmacy program who displays school spirit, is involved in school-related extra curricular activities, and promotes the profession of pharmacy. The recipient shall be chosen by student ballot. It is awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid, on the recommendation of the Director, School of Pharmacy.

#### **THE EXCELLENCE IN COMPOUNDING AWARD**

This award is given to a student completing the first year of the Pharmacy program who obtains the highest mark in the compounding laboratory portion of the first year pharmaceuticals courses. The award is valued at \$150.00. It will be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid on the recommendation of the Director, School of Pharmacy.

#### **FISHER SCIENTIFIC AWARD**

This award of \$250.00 is provided to the Pharmacy student who makes the best presentation at the Annual Research Forum at the School of Pharmacy. It is awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid, on the recommendation of the Director, School of Pharmacy.

#### **THE EDWARD D. FREEMAN BURSARY**

This bursary honours the memory of Edward D. Freeman, a prominent Harbour Grace pharmacist who was a founding member of the Newfoundland Pharmaceutical Association (now the Newfoundland and Labrador Pharmacy Board). Valued at a portion of the income from the endowment it shall be awarded to a deserving student of good academic standing in the School of Pharmacy on successful completion of Pharmacy Year III to enable the student to complete his/her studies with financial assistance. This bursary will be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid based on the recommendation of the Director, School of Pharmacy.

#### **THE CHARLES E. FROSST SCHOLARSHIP IN PHARMACY**

This award of \$1,000.00 and a medal is presented by Merck Frosst Canada Inc. to the top first-year student of the Pharmacy program. It is awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid, on the recommendation of the Director, School of Pharmacy.

#### **THE ROBERT HEALE MEMORIAL BURSARY**

This bursary honours the memory of Robert Heale, an honorary life member of the Newfoundland Pharmaceutical Association (now the Newfoundland and Labrador Pharmacy Board) who practised for over 50 years as a community pharmacist; and trained many pharmacists before pharmacy training programs were in place in Newfoundland. It is awarded to a student in any year of the pharmacy program who demonstrates scholarship standing and financial need. It will be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid on the basis of a recommendation from the Director, School of Pharmacy.

#### **THE DR. L.R. HENSMAN PRIZE**

This prize consists of a cash award and a trophy to be kept on permanent display in the School of Pharmacy. It will be awarded to the student who places first in the CAPSI sponsored patient interview competition. Each year the name of the student will be affixed to the trophy and a \$100.00 cash prize will be awarded. This prize is awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid, on the recommendation of the Director, School of Pharmacy.

#### **THE J. KEITH LAWTON MEMORIAL BURSARY**

This bursary has been established by the Board of Directors and employees of Lawton Drug Stores with the support of the Sobeys Foundation, to honour the memory of J. Keith Lawton. The value of the award will represent the interest generated from the endowment each year. It will be awarded to a deserving student selected from all students enrolled in the Pharmacy program. This award will be made by the Senate Committee on Undergraduate Scholarships and Financial Aid on the recommendation of the School of Pharmacy.

#### **THE L.J. LAWTON MEMORIAL AWARD**

A plaque, donated by the Canadian Pharmacists Association in memory of Louis J. Lawton, a founder of the Newfoundland Pharmaceutical Association (now the Newfoundland and Labrador Pharmacy Board), is presented each year as an Honor Award to a student entering the final year of the Pharmacy program. The recipient shall be chosen by the students and faculty by ballot in recognition of a commitment to the School of Pharmacy as well as a high degree of academic ability and showing of promise in making significant contributions to the profession of Pharmacy. In addition, this shall be accompanied by a miniature award and monetary award valued at the income from the endowment each year. The award will be made by the Senate Committee on Undergraduate Scholarships

and Financial Aid, on the recommendation of the Director, School of Pharmacy.

#### **THE MCKESSON SCHOLARSHIP/BURSARY**

McKesson provides two awards valued at \$250 each. These awards will be open to all students enrolled in the School of Pharmacy and will be awarded on the basis of academic merit and financial need. The awards will be made by the Senate Committee on Undergraduate Scholarships and Financial Aid on the recommendation of the Director, School of Pharmacy.

#### **THE MERCK SCHOLARSHIP**

This award consists of \$1,000, a Merck Manual and a Merck Index. It is presented by Merck Frosst Canada Inc. to the top second-year student of the Pharmacy program. It is awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid, on the recommendation of the Director, School of Pharmacy.

#### **THE NOVOPHARM SCHOLARSHIP/BURSARY**

Novopharm Limited provides two awards in the amount of \$500 to be granted annually to students achieving excellence in one of pharmaceutical manufacturing, biopharmaceutics, or medicinal chemistry. The awards will be made by the Senate Committee on Undergraduate Scholarships and Financial Aid on the recommendation of the Director, School of Pharmacy.

#### **THE ORGANON CANADA LIMITED SCHOLARSHIP/BURSARY**

Organon Canada Limited offers annually an award of \$350 which is open to all students enrolled in the School of Pharmacy. In addition, a permanent award in the form of a text book will also be given. The award is given to a deserving student of good academic standing. The award will be made by the Senate Committee on Undergraduate Scholarships and Financial Aid on the recommendation of the Director, School of Pharmacy.

#### **PFIZER CONSUMER HEALTH CARE AWARD**

An annual award of \$500.00 is presented by Pfizer Consumer Health Care to a student who excels in Therapeutics I (Pharmacy 4104). The award will be made by the Senate Committee on Undergraduate Scholarships and Financial Aid on the recommendation of the Director, School of Pharmacy.

#### **PHARMACEUTICAL SUPPLIES LIMITED SCHOLARSHIP/BURSARY**

This award of \$500.00 is provided to a student who has successfully completed the first year of the Pharmacy program. It is awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid, on the recommendation of the Director, School of Pharmacy.

#### **RATIOPHARM ENTRANCE AWARD**

Ratiopharm provides a \$1,000.00 award annually to a student entering first year Pharmacy. The recipient will be selected on the basis of academic achievement and admission requirements. The award will be made by the Senate Committee on Undergraduate Scholarships and Financial Aid on the recommendation of the Director, School of Pharmacy.

#### **SABEX INTERNATIONAL SCHOLARSHIP/BURSARY**

Sabex International (1980) Limited offers annually four awards of \$500.00 each which are open to all students enrolled in the School of Pharmacy. They are to be awarded to students of good academic standing with an aptitude for Pharmacy. The award will be made by the Senate Committee on Undergraduate Scholarships and Financial Aid on the recommendation of the Director, School of Pharmacy.

#### **THE SCHOOL OF PHARMACY ENTRANCE SCHOLARSHIPS**

The School of Pharmacy provides two awards annually in the amount of \$1,000.00 each to students entering the first year of the program. Recipients will be selected on the basis of academic achievement and admission requirements. These awards will be granted by the Senate Committee on Undergraduate Scholarships and Financial Aid on the recommendation of the Director, School of Pharmacy.

#### **THE SHOPPERS DRUG MART ASSOCIATES SCHOLARSHIPS/BURSARIES**

Shoppers Drug Mart provides three scholarships/bursaries valued at \$600.00 each. These awards will be open to all students enrolled in the School of Pharmacy and will be awarded on the basis of academic merit and financial need. The awards will be made by the Senate Committee on Undergraduate Scholarships and Financial Aid on the recommendation of the Director, School of Pharmacy.

#### **THE AUGUSTUS STAFFORD MEMORIAL SCHOLARSHIP**

This award is presented to honor a founding member of the Newfoundland Pharmaceutical Association (now the Newfoundland and Labrador Pharmacy Board), the late Augustus Stafford of St. John's. The award, consisting of \$300, is given to the student achieving the highest academic standing in the first year of the Pharmacy program. The award will be made by the Senate Committee on Undergraduate Scholarships and financial Aid on the recommendation of the Director, School of Pharmacy.

#### **THE WYETH AWARD OF EXCELLENCE**

Wyeth Limited presents an annual award consisting of a certificate mounted on a plaque and a \$200 cash prize. The award is presented for excellence in Clinical Pharmacy by a graduating pharmacy student. The award will be made by the Senate Committee on Undergraduate Scholarships and Financial Aid on the recommendation of the Director, School of Pharmacy.

### **3.12 School of Social Work**

The following are available to students in the School of Social Work based on the recommendation of the Director.

#### **THE ALCOHOL AND DRUG DEPENDENCY COMMISSION COMMEMORATIVE AWARDS**

These awards have been established to commemorate the Alcohol and Drug Dependency Commission (1982-1992). In an effort to promote the pursuit of addictions studies in various disciplines, it is hoped that recipients will pursue careers in addiction-related fields. Up to three awards, valued at \$750.00 each, are available annually and open to students who have completed a major or published paper at the undergraduate or graduate level or are completing an Honors Dissertation on addictions issues. It will be awarded on a rotating basis to students in Pharmacy, Nursing, Medicine, and Social Work with a Faculty of School receiving only one award in any given scholarship year. These awards will be granted by the Senate Committee on Undergraduate Scholarships and Financial Aid upon recommendation of the Dean/Director/Head of the respective Faculty or School.

#### **THE JACKIE BROWN MEMORIAL SOCIAL WORK SCHOLARSHIP**

This scholarship has been established in the memory of Jackie Brown, a dedicated social worker who was an activist for social justice. Valued at \$500.00 annually, it will be awarded to a full time undergraduate social work student who best epitomizes Jackie's commitment and energy to creating positive change related to a social justice issue in his/her community. The award, however, is not necessarily intended for the student with the highest academic standing. This scholarship will be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid upon the recommendation of the Director, School of Social Work.

#### **THE MEMORIAL UNIVERSITY OF NEWFOUNDLAND SOCIAL WORK SCHOLARSHIP**

This scholarship, at a value of at least \$350.00, is awarded annually to a Social Work major enrolled in full-time study at Memorial University of Newfoundland. In the awarding of this scholarship, scholastic standing and financial need will be taken into account. The scholarship will be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid on the recommendation of the

Director of Social Work and may be renewed in a subsequent year.

#### **THE PROFESSOR JOHN S. MORGAN SCHOLARSHIP**

This scholarship has been named to honour the late Dr. John S. Morgan, an honorary graduate of the University who served as Visiting Professor of Social Work during the 1976-77 academic year. It is valued at \$500.00 per annum and will be awarded on the basis of academic merit to an undergraduate student enrolled in the School of Social Work. The scholarship will be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid on the recommendation of the Director of the School.

#### **THE JOHN J. MURPHY SCHOLARSHIP IN SOCIAL WORK**

This scholarship, valued at \$500.00, is awarded annually to a student who has achieved academic excellence upon completion of the first year of the Social Work program. The award, however, is not necessarily intended for the student who has received the highest average in this category. It is awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid upon the recommendation of the Director, School of Social Work.

#### **THE ELIZABETH A. NEWLANDS MEMORIAL SCHOLARSHIP IN SOCIAL WORK**

This scholarship has been named to honour the late Mrs. Elizabeth Newlands, one of the first graduates of the B.S.W. Program at Memorial University of Newfoundland. Valued at a minimum of \$1,000.00 annually, it will be awarded on the basis of academics to either a graduate or undergraduate student enrolled in the School of Social Work. If granted to an undergraduate the scholarship will be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid. If awarded to a Graduate Student, it will be awarded by the Dean, School of Graduate Studies. In either case the scholarship will be awarded on the basis of an appropriate recommendation from the Director, School of Social Work.

#### **THE DR. J. VICTOR THOMPSON SCHOLARSHIP IN SOCIAL WORK**

This scholarship, valued at not less than \$650.00 is awarded annually to a full-time Social Work student upon completion of at least 90 credit hours in Social Work and other courses at Memorial University of Newfoundland. The award will be made on the basis of academic excellence by the Senate Committee on Undergraduate Scholarships and Financial Aid, acting on the recommendation of the Director, School of Social Work.

## **4 Scholarships, Bursaries, and Awards Administered By the Senate Committee On Undergraduate Scholarships and Financial Aid for Which Undergraduate Students Attending the Sir Wilfred Grenfell College at Corner Brook May Qualify**

Although students on the Corner Brook campus are eligible for other awards listed in this booklet, the following awards are tenable specifically at Sir Wilfred Grenfell College:

#### **THE FRED ALDRICH SCIENCE SCHOLARSHIP**

This scholarship, established by the Corner Brook and Area Branch of the Alumni Association of Memorial University of Newfoundland, is awarded annually to a student at Sir Wilfred Grenfell College who is in the fourth semester of full-time study, who has accumulated at least 45 credit hours, and who is registered in a science program at Memorial University of Newfoundland. The scholarship may be held at either Corner Brook or St. John's. Valued at \$1,000.00, the award is made on the basis of outstanding academic performance. The scholarship is awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid upon the recommendation of the Scholarship Committee at Sir Wilfred Grenfell College and the Head of Science at the College.

#### **THE KATY BINDON SCHOLARSHIP**

This scholarship, one or more valued at \$1,000.00 each annually, was created by friends of Dr. Katy Bindon with the assistance of the local branch of the Memorial University of Newfoundland Alumni Association and colleagues at Sir Wilfred Grenfell College. It was created to mark the contribution that Dr. Bindon made at the college during her tenure as its Principal from 1991-1997. The scholarship is to be awarded to a student entering his or her fourth year in any degree program offered at Sir Wilfred Grenfell College. The recipient should have combined academic excellence with an outstanding contribution to student life at SWGC. The scholarship is to be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid on the recommendation of the Scholarship Committee at Sir Wilfred Grenfell College.

#### **THE BREAKWATER FOLKLORE/FOLKLIFE SERIES AWARD**

The Breakwater Books Folklore Prize is awarded annually for out-standing student performance in undergraduate folklore courses at Sir Wilfred Grenfell College. It is awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid upon recommendation of the Head of Social Science at the College in consultation with Folklore Faculty.

#### **EDWARD P. BROWNE SCHOLARSHIP**

This scholarship was established by individual members of faculty, staff and student body of Sir Wilfred Grenfell College in memory of the late Edward P. Browne. Professor Browne was Co-ordinator of Physical Education and Recreation at Grenfell College from its opening until his death in 1982. The scholarship is open to all full-time students who have spent at least two semesters at Grenfell College. It is awarded on the basis of academic standing, participation in college life and financial need. The award will be made by the Senate Committee on Undergraduate Scholarships and Financial Aid on recommendation from the College. The value of the award will be determined from the interest accrued on the principal sum donated.

#### **CANADIAN COAST GUARD NEWFOUNDLAND REGION ALUMNI ASSOCIATION BURSARY**

This Bursary is made possible by the Canadian Coast Guard Alumni. Valued at \$500.00 annually, it will be awarded to a 2nd year Visual Arts student who excels in drawing and painting. Financial need will also be taken into consideration. The bursary will be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid on the recommendation of the Scholarship Committee of Sir Wilfred Grenfell College in consultation with the Head, Division of Fine Arts.

#### **CANADIAN SOCIETY FOR CHEMISTRY SILVER MEDAL**

This medal is presented annually to the student at Sir Wilfred Grenfell College with the highest average in third-year Environmental Chemistry courses. The award is made by the Senate Committee on Undergraduate Scholarships and Financial Aid upon the recommendation of the Head of Science at the College.

#### **THE CITY OF CORNER BROOK J.R. SMALLWOOD SCHOLARSHIP**

This scholarship was established in 1991 by the City of Corner Brook to honour the Honourable Joseph R. Smallwood, first Premier of Newfoundland, who contributed significantly to the educational and cultural development of Newfoundlanders. This fund, donated by the City is a tangible mark of the support given by the City to Sir Wilfred Grenfell College since the campus opened in Corner Brook.

The scholarship valued at \$1,000.00 will be awarded to a student who is a resident of the City of Corner Brook in the final year of high school who is proceeding to Sir Wilfred Grenfell College. The award will be made, upon application, to a student of outstanding academic merit and promise who has demonstrated active participation in school and community life.

The scholarship will be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid, acting on the recommendation of a special selection committee appointed by the Principal, with a representative from City Council.

#### **CORNER BROOK PULP AND PAPER LIMITED SCHOLARSHIPS**

From funds donated annually by Corner Brook Pulp and Paper Limited, a number of scholarships are available to students attending Sir Wilfred Grenfell College:

1. Several scholarships valued from \$250.00-\$500.00 each are available to students in any faculty or year of study;
2. In addition to the above, two scholarships of \$250.00 each are available to students intending to study Business Administration and Engineering. These scholarships are open to students who have spent at least one semester at the College.

The awards will be made by the Senate Committee on Undergraduate Scholarships and Financial Aid on the recommendation of the Scholarship Committee at the College.

#### **THE COTTAGE CRAFTS ASSOCIATION SCHOLARSHIP**

This scholarship is supported by the interest on \$5000.00 donated by Cottage Crafts Association, Corner Brook. It is awarded to a student in Fine Arts at Sir Wilfred Grenfell College. Preference will be given to a student with an interest in fibre arts, including costume design, textile design or textile manufacturing. The scholarship is awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid upon recommendation from the College.

#### **THE JAMES ALEXANDER DOULL MEMORIAL SCHOLARSHIP IN HUMANITIES**

This scholarship was established by Professor Floy Andrews Doull, to honour the memory of James Alexander Doull, teacher, colleague and friend. This scholarship, valued at a portion of the annual accrued interest, will be awarded annually to a student registered full-time in the Humanities Program at Sir Wilfred Grenfell College. It will be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid on the basis of scholarship standing and a recommendation from the Chair of Humanities, Sir Wilfred Grenfell College.

#### **THE ENVIRONMENTAL SCIENCE MERIT SCHOLARSHIP**

One Merit Scholarship, valued at \$2,500.00 annually will be awarded to an outstanding student entering the fourth year of the Environmental Science program at Sir Wilfred Grenfell College. It will be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid on the basis of scholarship standing and a recommendation from the Chair of Environmental Science, Sir Wilfred Grenfell College.

#### **FISHER SCIENTIFIC AWARD**

This award, valued at \$50.00, is presented annually to the student with the highest average in each of first, second, third and fourth year Chemistry courses. The award is made by the Senate Committee on Undergraduate Scholarships and Financial Aid upon the recommendation of the Head of Science at the College.

#### **THE MADELINE FOWLER PRIZE IN ENGLISH**

This prize, valued at \$100.00, is in memory of Madeline Fowler, whose love of reading was an inspiration to her children. The prize is normally awarded to a senior student in the B.A. Specialization in English engaged in full-time studies at Sir Wilfred Grenfell College. The award will be made by the Senate Committee on Undergraduate Scholarships and Financial Aid on the recommendation of the Program Chair of English at the College.

#### **THE DR. G.A. FRECKER MEMORIAL ALUMNI BURSARIES**

The Memorial University of Newfoundland Alumni Association has established, from its Annual Fund, five bursaries named in honour of the late Dr. G.A. Frecker, Chancellor, Memorial University of Newfoundland, 1971-79, and valued at \$500.00 each. Four of the bursaries are tenable at the St. John's campus and one at the Sir Wilfred Grenfell College at Corner Brook. The bursaries will be awarded annually to full-time students in any faculty or year on the basis of academic standing and financial need.

#### **THE JOANNE SWAN GREENLEE PRIZE IN HISTORICAL STUDIES**

This prize, valued at \$500.00 will be awarded in memory of Joanne (Swan) Greenlee, who, for two decades, delighted in the hearty appetites and lively conversation of Grenfell students who gathered to discuss history at her home. It will normally be awarded to a full-time senior student, at Sir Wilfred Grenfell College, majoring in Historical Studies who displays outstanding cumulative merit in four History courses during the academic year. This prize will be awarded by the Senate Committee on Undergraduate Studies and Financial Aid on the recommendation of the Chair of Historical Studies.

#### **THE RUFUS GUINCHARD ENTRANCE SCHOLARSHIP**

This scholarship has been established by the Newfoundland government in honour of the late Rufus Guinchard.

The award, valued at \$2,000.00, is presented annually to a student entering Sir Wilfred Grenfell College, who has demonstrated a commitment to the preservation of Newfoundland heritage and culture. This commitment may be reflected in Newfoundland music, folklore, art or writing.

Applicants for the Rufus Guinchard Scholarship should submit, with their application, either a statement of their interests relevant to this scholarship, or a completed piece of work.

The award will be made by the Senate Committee on Undergraduate Scholarships and Financial Aid, based upon the recommendation of the Scholarship Committee at Grenfell College.

#### **THE IDA HARVEY SCHOLARSHIP**

This scholarship, in memory of Ida Harvey, is supported by a fund established in 1988 on the occasion of the opening of the Fine Arts Building. It is awarded on merit to any student in a Bachelor of Fine Arts Program by the Senate Committee on Undergraduate Scholarships and Financial Aid on the recommendation of the Scholarship Committee at Sir Wilfred Grenfell College.

#### **THE E.J.F. HODGETT SCHOLARSHIP IN SCIENCE**

This scholarship was established by friends and colleagues of Professor Ferriss Hodgett on the occasion of his retirement, in celebration of his outstanding contributions and service to Memorial University of Newfoundland, and in particular Sir Wilfred Grenfell College. Professor Hodgett, a native of Belfast, in the north of Ireland, served as Vice-Principal of Grenfell College from 1975-1992.

This scholarship, valued up to two semesters' tuition, will be awarded to the student entering second year at Sir Wilfred Grenfell College who has attained scholarship standing and has received the second highest overall average in his/her first year having completed at least four courses in the Natural Sciences. The award shall be made by the Senate Committee on Undergraduate Scholarships and Financial Aid on recommendation of the Scholarship Committee of Sir Wilfred Grenfell College.

#### **THE GERVASE C. HOLLANDER PRIZE IN BIOLOGY**

This prize was established in 1982 by Mrs. Hollander in memory of her husband, a former teacher and school supervisor with the Humber-Bay St. George Roman Catholic School Board. Valued at approximately \$100.00, it is awarded annually to a second-year student who has completed three or more courses in Biology beyond the first year and who have demonstrated excellence and initiative in both the theoretical and practical aspects of Biology. The award is made by the Senate Committee on Undergraduate Scholarships and Financial Aid upon the recommendation of the Head of Science at Sir Wilfred Grenfell College.

**HUSKY ENERGY SEAROSE BURSARY**

The bursary is made possible through a generous donation from Husky Energy, as operator of the White Rose Project, in recognition of the donation of art work by Sir Wilfred Grenfell College's Fine Arts students. The art work is displayed on the FPSO (Floating Production Storage and Offloading) vessel the *SeaRose*. The bursary is being established to provide travel funding to students who, for financial reasons, would not otherwise have the opportunity to travel. Valued at \$2,000.00 annually, it will be awarded on a rotating basis between Visual Arts and Theatre Arts students attending Harlow Campus. To be eligible to receive the bursary students must have clear standing and demonstrate artistic merit and financial need. The bursary will be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid on the recommendation of the Scholarship Committee at Sir Wilfred Grenfell College in consultation with the Head, Division of Fine Arts.

**THE IMPERIAL TOBACCO CANADA FINE ARTS SCHOLARSHIP**

This scholarship, established in 1998 by Imperial Tobacco Canada in support of the *Opportunity Fund* Campaign, has a minimum value of \$2,000.00 annually. It will be awarded on the basis of scholarship standing to a full-time student in the Bachelor of Fine Arts who shows promise and plans to continue in the field. It will rotate annually between the disciplines of Visual and Theatre Arts. It will be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid upon the recommendation of the Scholarship Committee at Sir Wilfred Grenfell College in conjunction with the Head, Division of Fine Arts.

**THE F. L. JACKSON AWARD IN PHILOSOPHY**

F. L. Jackson taught Philosophy at Memorial University of Newfoundland for twenty-nine years, for nine years serving as Head of the Department. Professor Jackson conceived the Department of Philosophy as a window on the grand tradition of philosophy, especially for Newfoundlanders, and it is this spirit which animates philosophy at Sir Wilfred Grenfell College. The F. L. Jackson Award will be given to students whose written work is distinguished by its appreciation of the history of philosophy. Generally there will be one award granted per academic year. It will be valued at a minimum of \$100 and will be awarded to a student in any year of study. The award will be made by the Senate Committee on Undergraduate Scholarships and Financial Aid upon the recommendation of the Scholarship Committee at Sir Wilfred Grenfell College and in consultation with the Philosophy faculty.

**THE OLOF LINDGREN SCHOLARSHIP**

This scholarship, the value of which will be determined by the annual interest accrued, is supported by a fund established by Dr. Orvil Olsen, a former Professor of Biology at Sir Wilfred Grenfell College, in memory of his grandfather Olof Lindgren, a Saskatchewan pioneer farmer, who was a firm believer in the value of education as a means of enhancing the quality of life. It is awarded to a student who has completed at least two years at Sir Wilfred Grenfell College and plans to proceed with the full degree on that campus. In awarding the scholarship, preference will be given to a student who has shown an interest in both the natural and physical sciences, and the arts. This award is based upon academic excellence. This scholarship is awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid on the recommendation of the Scholarship Committee at Sir Wilfred Grenfell College.

**THE WILLIAM AND NAOMI LUNDRIGAN SCHOLARSHIP**

The William and Naomi Lundrigan Scholarship shall be awarded to an entrance student attending Sir Wilfred Grenfell College, Corner Brook. One scholarship, valued at not less than \$2,000.00 will be awarded annually. The recipient must spend at least one semester at Sir Wilfred Grenfell College. The Lundrigan Scholarship will not be awarded to a student receiving another scholarship of equal or greater value administered by the Senate Committee on Undergraduate Scholarships and Financial Aid. It will be paid in two equal instalments (September and January) with the second instalment being conditional on the student maintaining a 70% average in the courses which comprise the 15 credit hours completed during the previous semester.

This scholarship will be awarded on the basis of scholarship standing, however, character, economic need, and any other relevant factors may be considered. The scholarship will be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid on the recommendation of the Scholarship Selection Committee at the College.

**THE KATHLEEN WAGSTAFF MACCALLUM MEMORIAL SCHOLARSHIP**

This scholarship, was established by the MacCallum family in honour of their mother, Kathleen. Valued at the annual interest, it will be awarded to a Fine Arts student beyond first year at Sir Wilfred Grenfell College who is specialising in Visual Arts. It will be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid on the basis of scholarship standing and a recommendation from the Scholarship Committee at Sir Wilfred Grenfell College in consultation with the Head, Division of Fine Arts. Factors such as financial need, family and community involvement, and contribution to the class may also be taken into account.

**THE MAXIM MAZUMDAR MEMORIAL SCHOLARSHIP IN THEATRE**

This scholarship is supported by a fund established by Theatre Newfoundland and Labrador in memory of Maxim Mazumdar, founding Artistic Director of T.N.L. It is awarded to a Sir Wilfred Grenfell College student who has completed the first year in the Theatre Degree Program and who has shown the most promise in any area of the Program.

This scholarship is awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid on the recommendation of the Scholarship Committee at Sir Wilfred Grenfell College.

**THE DR. M.O. AND GRACE MORGAN SCHOLARSHIP IN FINE ARTS**

This scholarship is the result of an endowment to Memorial University from the estate of Dr. and Mrs. Morgan. Valued at a portion of the annual accrued interest, it will be awarded to a Fine Arts student beyond first year at Sir Wilfred Grenfell College. It will rotate annually between Visual Arts and Theatre Arts. This scholarship will be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid on the basis of scholarship standing and a recommendation from the Scholarship Committee at Sir Wilfred Grenfell College in consultation with the Head, Division of Fine Arts.

**THE MAXWELL AND EMILY MULLETT SCHOLARSHIP**

This scholarship is supported by the interest on monies donated by Maxwell and Emily (Wicks) Mullett. It is awarded to a student in the final year of studies in Visual Arts at Sir Wilfred Grenfell College on the basis of achievement and promise. Preference is given to Newfoundland and Labrador students. The scholarship is awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid on the recommendation of the Scholarship Committee at Sir Wilfred Grenfell College.

**THE NEWFOUNDLAND AND LABRADOR FOREST PROTECTION ASSOCIATION SCHOLARSHIP**

This scholarship valued at \$2,000.00 was established by the Newfoundland and Labrador Forest Protection Association as a tribute to the hundreds of volunteers who served the Association since it was formed as a forest fire fighting unit in 1910. Since that time, the Association has become synonymous with forest education and related programs to raise the public's awareness of the need to conserve and protect the forest resource of the province. This scholarship will be awarded annually to a forestry student attending Sir Wilfred Grenfell College who has completed two years of study and who will be pursuing a Bachelor's degree in Forestry. Factors including leadership potential, communications skills, academic standing and financial need will be the main criteria considered in the selection process. The scholarship will be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid on the basis of a recommendation from the scholarship selection committee at Sir Wilfred Grenfell College in consultation with the Head of the division of Science at the college.

**THE ORVIL OLSEN BIOLOGY PRIZE**

This prize was established to commemorate the tenth anniversary of the opening of Sir Wilfred Grenfell College. It is valued at approximately \$100.00 annually. Dr. Olsen taught Biology at the College from its opening until his retirement in 1980. The prize will be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid upon recommendation of the Head of Science at Sir Wilfred Grenfell College to an outstanding student of first year Biology.

**THE FLORENCE O'NEILL SCHOLARSHIPS**

An endowment donated to the University by Florence O'Neill, Ed.D., C.M., LL.D., honorary graduate of Memorial University of Newfoundland, distinguished for her contribution to the fields of adult education and community development, will fund annual scholarships valued up to \$1,000.00 each. These awards will be made available to full-time undergraduate students, preferably to those from rural Newfoundland and Labrador, on the basis of scholarship standing. One shall be given annually to a student attending the Sir Wilfred Grenfell College in Corner Brook.

**THE RAYMOND J.G. PAFFORD (1937-1997) MEMORIAL SCHOLARSHIP**

This scholarship, established in 2000 by Mrs. Roberta Pafford, in memory of her husband Raymond, is valued at the annual interest on an endowment. It will be awarded on the basis of scholarship standing to a full-time student in any year of study of the Bachelor of Fine Arts program who shows promise and plans to continue in the field. It will rotate annually between the disciplines of Theatre Arts and Visual Arts. It will be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid upon the recommendation of the Scholarship Committee at Sir Wilfred Grenfell College in conjunction with the Head, Division of Fine Arts.

**THE PALLISER PRIZE IN HISTORY**

This prize is in honour of Capt. Hugh Palliser, RN, governor and commander-in-chief at Newfoundland from 1764 until 1768; in 1764 he became the first governor to visit Western Newfoundland. It is awarded annually to the student who has earned the highest cumulative average in at least five History courses after the first two years of study towards a degree in Historical Studies or with a minor in Historical Studies. The prize is valued at \$250, and will be awarded by the Senate Committee on Undergraduate Studies and Financial Aid on the recommendation of the Scholarship Committee at Sir Wilfred Grenfell College and the members of the Historical Studies programme. In the event that no student qualifies in any given year, the award will not be given.

**MAY PARKER MEMORIAL SCHOLARSHIP IN CLASSICS**

This scholarship, valued at \$400.00, was established by Professor Michael Parker in memory of his mother, May Parker. It is awarded annually to a full-time student at Sir Wilfred Grenfell College who has shown outstanding interest and excellence in the study of Classics. The award will be made by the Senate Committee on Undergraduate Scholarships and Financial Aid on the recommendation of the Scholarships Committee at Sir Wilfred Grenfell College.

**THE C.F. POOLE SCHOLARSHIP**

This scholarship was established from funds donated by friends of Dr. Cyril F. Poole on the occasion of his retirement as Principal of Sir Wilfred Grenfell College.

Dr. Poole, a native of Pilley's Island, Notre Dame Bay, was committed to excellence throughout his distinguished career as a university teacher and administrator in several Canadian universities including Sir Wilfred Grenfell College, where he served as Principal from 1977 to 1990.

The scholarship honouring his contribution to excellence in education will be awarded annually to a Sir Wilfred Grenfell College student of outstanding academic merit and promise. Valued at approximately \$1,000.00, it will be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid on recommendation from the College.

**THE JAMES C. PRATT MEMORIAL SCHOLARSHIP**

This scholarship, valued at a minimum of \$1000.00, has been established in memory of James C. Pratt by his daughter, Mrs. Daphne L. House. The scholarship is to be awarded annually by the Senate Committee on Undergraduate Scholarships and Financial Aid on the recommendation of the Program Chair of Visual Arts at Sir Wilfred Grenfell College, to a full-time student in the discipline of Bachelor of Fine Arts (Visual Arts) who shows promise and purpose of continuing in that field.

**THE REFRESHMENTS CANADA SCHOLARSHIP**

This scholarship, donated by the soft drink industry of Newfoundland and Labrador, is valued at \$2,000.00 and will be awarded annually to an outstanding full-time student beyond first year of the Environmental Science Program at Sir Wilfred Grenfell College. It will be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid on the Basis of scholarship standing and a recommendation from the Scholarship Committee at Sir Wilfred Grenfell College in consultation with the Chair of Environmental Science.

**THE FRANCIS J. RYAN MEMORIAL SCHOLARSHIP**

This fund was established by the Stewart McKelvey Stirling Scales law firm in memory of their late senior partner Francis J. Ryan. Valued at the annual interest on the endowment, the award will be made to a Fine Arts student specializing in Visual Arts at Sir Wilfred Grenfell College. It will be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid on the basis of scholarship standing and a recommendation from the Scholarship Committee at Sir Wilfred Grenfell College in consultation with the Head, Division of Fine Arts. Financial need may be taken into account.

**SIR WILFRED GRENFELL COLLEGE RESIDENCE SCHOLARSHIP**

This award, valued at \$500.00, is available to a student who has spent at least two semesters in residence at the College. Academic performance and contribution to college life will be the main criteria for choosing the recipient. The scholarship is awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid upon recommendation from the College.

**SIR WILFRED GRENFELL COLLEGE SCHOLARSHIP FUND**

Funds are available for the purpose of providing scholarships to students in their first and second year of studies at Sir Wilfred Grenfell College. The scholarships will be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid upon the recommendation of the Scholarship Committee at the College. Academic standing and financial need will be taken into account when making the awards.

**THE SISTERS OF MERCY ANNIVERSARY SCHOLARSHIP**

This scholarship was established by the Sisters of Mercy to commemorate the 100th anniversary of the arrival of the sisters on the west coast of Newfoundland in 1893. The Sisters of Mercy, educators in Newfoundland since 1842, have been associated with Memorial University of Newfoundland since the University was established.

The scholarship valued at a minimum of \$1,000.00 will be awarded annually to a student from Western/Northern Newfoundland or Labrador entering Sir Wilfred Grenfell College with full-time status. Academic standing and promise will be the main criteria. Consideration may be given to candidates' financial circumstances.

The scholarship will be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid on the recommendation of the Scholarship Committee at Sir Wilfred Grenfell College.

**THE HONOURABLE P. LLOYD AND ELIZABETH SOPER SCHOLARSHIP**

This scholarship is provided from a fund established by the Honourable P. Lloyd and Elizabeth Soper. It will be awarded to a student at Sir Wilfred Grenfell College who has completed his or her first year of studies and is continuing as a full-time student at the College for the second year. The scholarship, valued at a minimum of \$1000.00, will be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid on the basis of scholarship standing and upon the recommendation of the Scholarship Committee at Sir Wilfred Grenfell College.

**THE SUN LIFE FINANCIAL SCHOLARSHIP IN APPLICATIONS OF TECHNOLOGY**

The Sun Life Financial Scholarship in Applications of Technology is consistent with the company's belief that education is key to the future well-being of individuals, business and society. The scholarship, valued at the annual interest on the endowment, will be designated on an annually rotating basis to a student on the Corner Brook campus and the St. John's campus. It will be awarded to a student within the faculties of Science, Engineering and Applied Science and Business Administration who is focussing his/her studies on the application of technology and has demonstrated scholarship standing. In addition, the student will have actively participated in extra-curricular activities and have been active in student life. The scholarship will be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid on the recommendation of the appropriate Dean and/or the Principal of Sir Wilfred Grenfell College.

**THE VISUAL ARTS ENTRANCE SCHOLARSHIP**

This scholarship, established by the Corner Brook and Area Branch of the Alumni Association of Memorial University of Newfoundland, is awarded annually to a student commencing first-year studies in the Visual Arts Program of the Bachelor of Fine Arts at Sir Wilfred Grenfell College. Valued at \$500.00, the award is made on the basis of previous academic performance and the quality of the portfolio submission. This scholarship is awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid upon the recommendation of the Scholarship Committee at Sir Wilfred Grenfell College.

**THE WABUSH MINES FINE ARTS TRAVEL BURSARY**

These bursaries are the result of an endowment to Memorial University of Newfoundland from Wabush Mines as part of their contribution to *The Opportunity Fund*. Valued at the annual interest on the endowment, they will support Fine Arts students at Sir Wilfred Grenfell College wishing to travel and gain exposure to Visual and Performing Arts. They will be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid on the basis of academics, financial need and a recommendation from the Scholarship Committee at Sir Wilfred Grenfell College in consultation with the Head, Division of Fine Arts.

**THE DR. HARRIET WARE MEMORIAL SCHOLARSHIP IN FINE ARTS**

This scholarship, valued at the annual interest on the initial endowment, is supported by a fund established by Martin Ware in memory of his mother, Dr. Harriet Ware. It will be awarded to a Sir Wilfred Grenfell College student who has completed the third year of a Bachelor of Fine Arts program in Theatre and is continuing in that program. The scholarship will be awarded to a student with scholarship standing who has also maintained at least a 70% average in non-theatre courses in their overall academic performance. Preference may be given to a single parent. It will be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid upon the recommendation of the Scholarship Committee at Sir Wilfred Grenfell College.

## 5 Convocation Awards

Convocation Medals and Awards are given at the Spring Convocation each year however, students who graduated at the previous Fall Convocation will also be considered for these awards. The "scholarship year" shall be defined as "May 1-April 30".

**GOVERNOR-GENERAL'S MEDALS**

Two Governor-General's Medals are awarded at Convocation: the Gold Medal to the graduate student who achieves the highest academic standing in his/her Graduate degree program; and the Silver to the undergraduate student obtaining a first degree who stands highest in the graduating class and has an average of first-class standing.

**UNIVERSITY MEDALS FOR ACADEMIC EXCELLENCE**

University Medals for Academic Excellence are given in the graduating year to candidates for Bachelor's degrees who are recommended by the Head of Department of each of the following: Anthropology, Biochemistry, Biology, Business Administration, Canadian Studies, Chemistry, Classics, Computer Science, Drama and Music, Earth Sciences, Economics, Education (Primary/Elementary, Intermediate/Secondary, Post-Secondary, Special, Native and Northern Teacher, Music), Engineering (Civil, Computer, Electrical and Computer, Mechanical, Ocean and Naval Architectural), English (both St. John's and Corner Brook programs), Environmental Science, Environmental Studies, Folklore, French and Spanish, Geography, German, General Science (SWGC), Historical Studies (SWGC), History, Humanities (SWGC), Kinesiology, Linguistics, Mathematics, Medicine, Medieval Studies, Music, Nursing (BN and Post-RN), Pharmacy, Philosophy, Physical Education, Physics, Political Science, Psychology (both St. John's and Corner Brook programs), Recreation, Religious Studies, Russian, Social/Cultural Studies (SWGC), Social Work, Sociology, Sociology/Anthropology, Theatre Arts and Visual Arts.

**THE UNIVERSITY MEDAL FOR EXCELLENCE IN AN ALL-COURSE MASTER'S PROGRAM**

The medal is awarded by the Dean of Graduate Studies to a student graduating at the Master's level who has demonstrated academic excellence in course work throughout his/her graduate program. One medal may be awarded in each academic year.

**THE UNIVERSITY MEDAL FOR EXCELLENCE IN A THESIS BASED MASTER'S PROGRAM**

The medal is awarded by the Dean of Graduate Studies to a Master's candidate who has demonstrated excellence in the production of a thesis. One medal may be awarded in each academic year.

**ASSOCIATION OF REGISTERED NURSES OF NEWFOUNDLAND AND LABRADOR AWARD FOR EXCELLENCE IN M.N. PROGRAM**

The Association of Registered Nurses of Newfoundland and Labrador offers an annual award to two graduating students of the Master's of Nursing Program. One award will be given for the non-thesis route and one for the thesis route. In the case of the latter (thesis), it will be based on a high quality thesis as determined by review of both internal and external examiners. In the case of the former (non-thesis), a high quality practicum project is required as evaluated by the co-supervisors. In both cases the successful student must have achieved a minimum average of 75% in courses required for the program as well as hold s ARNNL license to practice. These awards are made at the annual Convocation. They will be awarded by the Dean, School of Graduate Studies based on a recommendation from the Director, School of Nursing.

**THE ASSOCIATION OF REGISTERED NURSES OF NEWFOUNDLAND AND LABRADOR AWARD OF EXCELLENCE IN THE BACHELOR OF NURSING (COLLABORATIVE) AND BACHELOR OF NURSING (POST-RN) PROGRAMS**

The Association of Registered Nurses of Newfoundland and Labrador offers a \$200.00 Award of Excellence to two graduating students who have demonstrated excellence in nursing practice. One award will be given to a graduating student in the Bachelor of Nursing (Collaborative) program, and one to a graduating student in the Bachelor of Nursing (Post-RN) program.

**THE AUSTRIAN AMBASSADOR'S PRIZE**

This prize, a book award, is to be awarded annually by the Senate Committee on Undergraduate Scholarships and Financial Aid on the recommendation of the Head, Department of German and Russian, to a graduating student who has majored in German Language and Literature and has a consistently good academic record at the University.

**THE CAPTAIN ROBERT A. BARTLETT SCIENCE AWARD**

As a spontaneous expression of their admiration and affection for a man who has a lasting place in the history of polar exploration, the Explorers' Club of New York and two kindred organizations - the Wilderness Club of Philadelphia and the Harvard Travellers' Club of Massachusetts - donated a sum of money to this University, as a memorial to Captain Bartlett. The University has placed this money in a trust fund, the interest on which is the value of the award. It will be based primarily on academic excellence. Consideration may also be given to the demonstration of the spirit of scientific exploration. The award is made annually to a student graduating in Science, on the recommendation of the President.

**THE BIRKS MEDAL**

The Birks Medal is provided by Henry Birks and Sons (Maritime) Limited for awarding to the student of the graduating class who has shown most leadership in student affairs during his or her university years.

**THE BIRKS GRADUATE MEDAL**

The Birks Graduate Medal is provided by Henry Birks and Sons (Maritime) Limited for awarding to the graduate student of the convocating class who has shown most leadership in student affairs during his or her university years.

**THE BREPOLS BOOK PRIZE IN MEDIEVAL STUDIES**

Brepols Publishing, Turnhout, Belgium, an international academic publisher with a very strong interest in medieval studies, has agreed to donate a prize consisting of a book to be selected from their current catalogue, to be awarded each year to an outstanding student graduating with Medieval Studies as a second major. The award will be made by the Senate Committee on Undergraduate Scholarships and Financial Aid on the recommendation of the Coordinator of Medieval Studies. If in any year there is no outstanding candidate in the opinion of the coordinator, it will not be awarded.

**DICK BUEHLER AWARD IN THEATRE**

This award is given to a student, at Spring convocation, who has completed the requirements for the diploma in Performance and Communications Media who will continue their training at an institution of higher learning or as an apprentice to an approved professional theatre or film company. Preference will be given to a student whose primary interest is in technical theatre. It will be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid on the recommendation of the Co-ordinator, Diploma In Performance and Communications Media.

**THE FACULTY OF BUSINESS ADMINISTRATION ADVISORY BOARD B.COMM. (CO-OP) AWARD FOR EXCELLENCE**

This award, established by the Advisory Board of the Faculty of Business Administration, is to be presented annually to an outstanding student in the graduating class of the B.Comm. (Co-op) program. The recipient will be selected based on a combination of academic performance, demonstrated leadership and general contribution within the program. This award will be made by the Senate Committee on Undergraduate Scholarships and Financial Aid upon the recommendation of the Dean of the Faculty of Business Administration.

**THE FACULTY OF BUSINESS ADMINISTRATION ADVISORY BOARD M.B.A. AWARD FOR EXCELLENCE**

This award, established by the Advisory Board of the Faculty of Business Administration, is to be presented annually to the outstanding student in the graduating class of the M.B.A. program. The recipient will be selected based on academic performance, demonstrated leadership and general contribution within the program. Selection will be made by the Scholarship Advisory Committee of the Faculty of Business Administration, acting on the advice of the Dean of the Faculty.

**FACULTY OF BUSINESS ADMINISTRATION DEAN'S AWARD**

These awards are made by the Dean of the Faculty, on the advice of his colleagues, to graduating students who have demonstrated academic excellence together with leadership qualities within the Faculty of Business Administration and/or the University.

**FACULTY OF BUSINESS ADMINISTRATION DEAN'S MBA AWARD**

This award is made by the Dean of the Faculty, on the advice of colleagues, to a graduating MBA student in recognition of academic excellence together with demonstrated leadership qualities in graduate student activities and service to the Faculty and/or the University.

**THE CANADIAN ASSOCIATION OF GEOGRAPHERS (CAG) AWARD**

The Canadian Association of Geographers (CAG) Award is given to the top student graduating with an Honours or General degree majoring in Geography in each university in Canada. The award at Memorial University of Newfoundland is made by the Senate Committee on Undergraduate Scholarships and Financial Aid upon a recommendation from the head of the Geography Department. Recipients receive a one-year membership in the association which includes a Subscription of *The Canadian Geographer*, a professional journal.

**CANADIAN SOCIETY FOR CIVIL ENGINEERING, CSCE, NEWFOUNDLAND SECTION CONVOCATION AWARD**

Each year the local section of the Canadian Society for Civil Engineering awards a prize which consists of a certificate and \$200.00 cash to the top student graduating with a Bachelor of Engineering - Civil, from Memorial University of Newfoundland. The successful candidate will have demonstrated commitment, dedication and consistent performance in academic as well as work terms. It will be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid upon the recommendation of the Dean, Faculty of Engineering and Applied Science.

**THE CANADIAN SOCIETY OF MECHANICAL ENGINEERING MEDAL FOR ACADEMIC EXCELLENCE**

Each year the Canadian Society of Mechanical Engineering awards a medal and certificate for outstanding achievement to a graduating student in the baccalaureate program in Mechanical Engineering who also demonstrates commitment, dedication and consistent performance in academic as well as work terms. It will be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid upon the recommendation of the Dean, Faculty of Engineering and Applied Science.

**THE COX HANSON O'REILLY MATHESON PRIZE IN LAW AND SOCIETY**

This prize is for the student graduating from the Law and Society minor program with the highest academic average. The recipient must have obtained an overall average of at least 75%, completed the course program in the normal number of years and be recommended to the Senate Committee on Undergraduate Scholarships and Financial Aid by the coordinator of the Law and Society program.

**THE DEAN'S CONVOCATION AWARD FOR MEDICINE**

This award is made possible by an initial generous donation from Dr. James Rourke, who started as Dean of Medicine in 2004. This will be the first convocation award for the Faculty of Medicine. One award of \$1000 will be made annually at Convocation to a graduating medical student who has made an outstanding personal contribution to bettering the lives of others through volunteer work and humanitarian acts while maintaining high academic standing. Consideration will be given to students who have exhibited the following characteristics: altruism, thoughtfulness, kindness and compassion. The award is made by the Senate Committee on Undergraduate Scholarships and Financial Aid, on the basis of a recommendation from the Dean, Faculty of Medicine. The Office of Student Affairs, Medicine will assist the Dean in his choice of an appropriate candidate.



**THE DEAN'S HONOUR AWARD IN ENGINEERING**

This award is in recognition of outstanding contribution made to the Faculty of Engineering and Applied Science through leadership in student affairs and service to the community while maintaining high academic standing.

**THE DAVID DUNSIGER AWARD FOR EXCELLENCE**

This award is for excellence in graduate studies in the Faculty of Engineering and Applied Science, and commemorates the contribution of Dr. A. David Dunsiger, a member of the Faculty of Engineering and Applied Science from 1974-79. It is awarded at the Spring Convocation to a graduate in the preceding year who produces work of outstanding quality. The recipient will be selected by the Faculty of Engineering Scholarship Advisory Committee, on the advice of the Dean of Engineering and Applied Science and the Dean of Graduate Studies.

**THE FRENCH AMBASSADOR'S PRIZE**

This prize, the gift of the Ambassador of France to Canada, is a book award made at Convocation to an outstanding graduate whose major was French. The award is made on the recommendation of the Head of the Department of French and Spanish.

**THE A.C. HUNTER PRIZE IN ENGLISH**

The A.C. Hunter Prize in English, established by the late Mrs. A.C. Hunter in memory of her husband, formerly Head of the Departments of English and French, and Dean of Arts and Science at this University, has a value of \$100.00 and is awarded annually at the Spring Convocation to the graduating student majoring in English who stands highest in the General Degree program. The prize is awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid on the recommendation of the Head, Department of English Language and Literature.

**THE IEEE NEWFOUNDLAND AND LABRADOR SECTION AWARD**

This award, which consists of a certificate and cash prize, is presented at the Spring Convocation to a graduating student in the Faculty of Engineering and Applied Science (Electrical and Computer Engineering Program) who has had a consistently good academic record in the professional courses required for the degree and who has made a significant contribution to the Faculty and to the IEEE student branch. It is awarded annually by the Senate Committee on Undergraduate Scholarships and Financial Aid on the recommendation of the Dean, Faculty of Engineering and Applied Science.

**THE WILLIAM J. MAY PRIZE IN POST-SECONDARY STUDIES (UNDERGRADUATE)**

This prize, valued at a minimum of \$500.00, was established by friends and family of the late Mr. William J. May. Mr. May was Director of Technical and Vocational Education for the province for a number of years and received an Honorary Doctorate from Memorial University of Newfoundland for his contributions to that field. The prize will also consist of a small certificate suitable for framing and will be awarded to the undergraduate student of the graduating class who receives the Medal of Excellence for Post-Secondary Studies (formerly Vocational Education) in his/her graduating year. In a year when there is no suitable candidate it will not be awarded. The prize will be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid on the recommendation of the Dean, Faculty of Education.

**THE MEMORIAL UNIVERSITY OF NEWFOUNDLAND ENGLISH STUDENT SOCIETY (MESS) AWARD**

This award was established in 2000 as a result of funds raised by the Memorial University English Students' Society (MESS) and the Faculty of the Department of English Language and Literature. The MESS Award recognizes the outstanding contribution to student life at Memorial University of Newfoundland made by the Memorial English Students' Society. It will be awarded annually at the Spring Convocation to one or more graduating English Honours or Major students who have consistently good academic records and who have made outstanding contributions to student life. The award will be valued at the annual interest on the endowment and will be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid on the recommendation of the Head, Department of English Language and Literature.

**THE GRACE MORGAN PRIZE IN BIOCHEMISTRY (NUTRITION)**

This prize is for the student graduating in honors Biochemistry (Nutrition) with the highest standing. The recipient must have obtained an overall average of at least 75%, completed the course program in the normal number of years and be recommended to the Senate Committee on Undergraduate Scholarships and Financial Aid by the Head, Department of Biochemistry.

**THE MARGARET FITZPATRICK MORGAN MEDAL IN NURSING**

This award will be made by the Senate Committee on Undergraduate Scholarships and Financial Aid on the recommendation of the Director, School of Nursing, Memorial University of Newfoundland.

**THE HARVEY AND DORIS MURCELL SCHOLARSHIP IN RELIGIOUS STUDIES**

This scholarship, donated to the University by Doris and the late Harvey Murcell of Harbour Grace, and valued at \$500.00, is awarded to a graduating student majoring in Religious Studies. To be eligible for the award, a student must have scholarship standing. Financial need, and the student's contribution to the Department of Religious Studies, may be considered. The award is made by the Senate Committee on Undergraduate Scholarships and Financial Aid on the recommendation of the Head, Department of Religious Studies.

**NEWFOUNDLAND & LABRADOR ASSOCIATION OF SOCIAL WORKERS' STUDENT AWARD**

The Newfoundland and Labrador Branch of the Canadian Association of Social Workers makes this award annually to a graduating B.S.W. student selected by the Association in consultation with the School of Social Work.

**THE NEWFOUNDLAND & LABRADOR TEACHERS' ASSOCIATION MEDAL**

This medal is awarded to a graduating student in Education who has had a consistently good academic record in the professional courses required for the degree and who has made an outstanding contribution to the Faculty of Education and to the University.

**PROFESSIONAL ENGINEERS AND GEOSCIENTISTS NEWFOUNDLAND AND LABRADOR ANNIVERSARY SILVER MEDAL**

The Professional Engineers and Geoscientists Newfoundland and Labrador offers a Silver Medal in the Faculty of Engineering and Applied Science to mark the occasion of fifty years of Engineering education at Memorial University of Newfoundland. The medal, to be tenable by a student in each year's graduating class, is to be awarded on the following conditions:

- a. high academic standing;
- b. outstanding leadership qualities;
- c. involvement in extracurricular activities;
- d. all-round contribution.

The selection of the winner is to be based on the recommendation of a Selection Committee within the Faculty, with the President of PEGNL or his delegate sitting on the Committee as a member.

**PROFESSIONAL ENGINEERS AND GEOSCIENTISTS NEWFOUNDLAND AND LABRADOR AWARD FOR EXCELLENCE**

The Professional Engineers and Geoscientists Newfoundland and Labrador has established an "Award for Excellence", which may be made to a student at Memorial University of Newfoundland who obtains an Engineering degree in not more than eight consecutive academic terms and who has completed the prescribed courses with the highest average mark in all the courses. This award takes the

form of a framed "Award for Excellence", suitably engraved, and presented by PEGNL at or about the time of Convocation

#### **PROFESSIONAL ENGINEERS AND GEOSCIENTISTS NEWFOUNDLAND AND LABRADOR AWARD FOR EXCELLENCE IN GEOSCIENCE**

The Professional Engineers and Geoscientists Newfoundland and Labrador have established an award for excellence in Geoscience which shall be awarded to the graduating student at Memorial University of Newfoundland who has shown the highest degree of academic excellence during his/her geoscience education. It takes the form of a framed "Award for Excellence" which is engraved and presented by PEGNL on or about the time of convocation. The award will be made by the Senate Committee on Undergraduate Scholarships and Financial Aid upon recommendation of the Head, Department of Earth Sciences.

#### **THE PRIZE OF THE AMBASSADOR OF THE FEDERAL REPUBLIC OF GERMANY**

This prize, a book award, the gift of the Ambassador of the Federal Republic of Germany in Canada, is to be awarded annually by the Senate Committee on Undergraduate Scholarships and Financial Aid on the recommendation of the Head, Department of German and Russian, to a graduating student who has majored in German Language and Literature and has a consistently good academic record at the University.

#### **THE SOCIETY OF CHEMICAL INDUSTRY MERIT AWARD**

The student graduating in Honours Chemistry and Biochemistry with the highest standing will receive a suitably engraved gold key and a year's Subscription to Chemistry and Industry. The recipient must have obtained an overall average of at least 75%, completed the course program in the normal number of years, and be recommended to the Senate Committee on Undergraduate Scholarships and Financial Aid by the Heads, Department of Chemistry and Biochemistry.

#### **THE SPANISH AMBASSADOR'S PRIZE**

This Prize, the gift of the Ambassador of Spain to Canada, is a book award made at Convocation to an outstanding graduate whose major was Spanish. The award is made on the recommendation of the Head of the Department of French and Spanish.

#### **THE GEORGE M. STORY CONVOCATION MEDAL IN ARTS**

This award was established in memory of Dr. George M. Story, Professor Emeritus of Memorial University of Newfoundland. The medal and a \$100.00 prize are awarded to the student graduating with a Bachelor of Arts who has demonstrated, as did Dr. Story, both academic excellence and a strong commitment to serving the University and the community. It will be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid upon the recommendation of the Dean of Arts.

#### **THE SWISS AMBASSADOR'S PRIZE**

One prize in French and one in German are awarded annually to graduating students who have majored in these languages. The prize in French is awarded on the recommendation of the Head, Department of French and Spanish, and the prize in German on the recommendation of the Head, Department of German and Russian.

#### **THE LESLIE THOMS CONVOCATION AWARD**

This award, valued at the interest on an endowment, was provided by friends and family of the late Mr. Thoms. It will be awarded at convocation to the undergraduate student of the graduating class who has shown positive, outstanding leadership in student affairs and activities during his or her university career while carrying a full-time course load for the majority of their undergraduate studies and maintaining good academic standing. It will be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid on the recommendation of the Dean, Student Affairs and Services.

#### **THE MOIRE A. WADLEIGH GRADUATE AWARD FOR EXCELLENCE IN ENVIRONMENTAL SCIENCE**

This award for graduate students in the Environmental Science Programme was established in memory of Dr. Moire A. Wadleigh, friend and colleague, caring teacher, dedicated scientist and beacon of excellence in Environmental Science and Geoscience. Two awards will be presented annually: one to the student completing the best Master of Science thesis in Environmental Science within the previous 12 months, the second to the student in the Master of Environmental Science programme with the best project and report completed in that year. Successful students must have achieved an average of at least 80% in courses required for the programme. Awards will be made by the Dean of Graduate Studies upon recommendation of the Board of Studies of the Graduate Programme in Environmental Science.

#### **THE CAPTAIN GEORGE C. WHITELEY ENGLISH PRIZE**

This prize is the gift of Mr. George C. Whiteley, Jr., a student of Memorial University College, 1926-27, in memory of his father, the late Captain George C. Whiteley. The prize, of the value of \$100.00, is awarded annually by the Senate Committee on Undergraduate Scholarships and Financial Aid on the recommendation of the Head, Department of English Language and Literature, to the student who graduates with B.A.(Hons.) in English with the highest standing. In the event that at any convocation there is no Honours graduate in English, the prize may be awarded to a graduating student of outstanding academic merit and promise in the General Degree program who is selected and recommended for the award by the Department of English. Other things being equal, the prize will be awarded to a student who has produced original work of literary merit.

## **6 Scholarships, Bursaries, and Awards Available for Undergraduate Students for Study Outside Newfoundland and Labrador**

#### **THE GORDON BILLARD AWARD IN EDUCATION**

A donation has been made to Memorial University of Newfoundland by Mr. Gordon Billard for the purpose of establishing a fund to provide financial assistance to Education students who live at the University's Harlow campus while undertaking approved studies in Great Britain. The award is intended to enhance the student's educational experience in Britain. Its value will be based on the annual interest on the fund. It will be awarded during the Spring Semester by the Senate Committee on Undergraduate Scholarships and Financial Aid upon the recommendation of the Dean, Student Affairs and Services. Academic achievement and financial need will be considered.

#### **THE COCA-COLA SCHOLARSHIP FOR INTERNATIONAL STUDIES**

This scholarship, valued at the annual interest on its endowment, has been established from contributions to the University's *Opportunity Fund* Campaign by The Coca-Cola Foundation. It will be awarded to a student who has completed at least two years of a degree program at Memorial University of Newfoundland and who has been accepted to attend a recognized university outside Canada for one or two semesters of study for transfer credit to Memorial University of Newfoundland towards completion of his/her undergraduate degree.

#### **THE HARLOW DEVELOPMENT CORPORATION SCHOLARSHIP**

The Harlow Development Corporation, Harlow, England, has made a grant to establish a scholarship fund to financially assist students from Memorial University of Newfoundland who wish to live at the University's Harlow campus while undertaking approved studies in Great Britain. The fund will also provide scholarships to students who are residents of Harlow and who wish to study at Memorial University of Newfoundland, or some other institute of learning, in Newfoundland. It is hoped that interest on the fund will finance five or six annual scholarships at £250 each.

**HARLOW TRAVEL AWARDS**

A number of travel awards, each valued to a maximum of £250 will be awarded to full-time undergraduate students registered at the Harlow Campus in a Memorial University of Newfoundland approved program. Preference will be given to students who are permanent residents of the Province of Newfoundland and Labrador and are attending the Harlow Campus for a minimum of six consecutive weeks residing on the campus for the duration of the award. Eligibility for these awards requires a minimum of clear academic standing in the previous scholarship year. The awards will be made by the Senate Committee on Undergraduate Scholarships and Financial Aid upon the recommendation of the Harlow Scholarship Trustees. Application forms are available in-person or by writing the Scholarships and Awards Office, Room 4018, University Centre, Memorial University of Newfoundland, St. John's, NL, A1C5S7, or by telephone to (709) 737-3956, or on the Harlow Campus web site at [www.mun.ca/harlow](http://www.mun.ca/harlow).

**THE ANN ELIZABETH CROSBIE (PERLIN) HARVEY MEMORIAL HARLOW SCHOLARSHIP**

This scholarship, valued at the interest on an endowment, was established by The Perlin Family Trust to assist undergraduate students from Memorial University of Newfoundland who wish to pursue their studies at the Harlow Campus in Harlow, England. It will be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid on the basis of scholarship standing with preference being given to students studying Theatre, and/or Drama Studies. Applications for this scholarship are available in-person or by writing the Scholarships and Awards Office, Room 4018, University Centre, Memorial University of Newfoundland, St. John's, NL, A1C 5S7, or by telephone to (709) 737-3956.

**THE ELIZABETH C. HESSON MEMORIAL SCHOLARSHIP IN GERMAN**

This scholarship was established in memory of Dr. Elizabeth C. Hesson, Head of the Department of German and Russian from 1986 to 1989 and a member of that Department from 1969 to 1989, through the generosity of her family, colleagues and friends. The scholarship has a value of \$1,000.00, and is normally awarded to a German major who has completed at least the second year of study at Memorial University of Newfoundland and who has demonstrated a high level of academic performance in German. The scholarship shall be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid upon the recommendation of the Head, Department of German and Russian, and is designed to assist the student to undertake a program of German studies in German-speaking Europe. In addition to academic excellence, financial need may be taken into account. This scholarship will not necessarily be awarded every academic year.

**THE A.C. HUNTER TRAVEL AWARD IN FRENCH**

This award has a value of not less than \$600.00 and is awarded annually. It has been established in memory of Dean A.C. Hunter through the generosity of Mrs. Hunter, the Provincial Government of Newfoundland, the Board of Regents of Memorial University of Newfoundland and Dean Hunter's former students and friends. The award shall take the form of a travel grant to a student, in second year or beyond, majoring or minoring in French who wishes to pursue a program of study of one or more semesters' duration, in French language, literature or culture, at a recognized institution in metropolitan France. Eligibility for this award requires a minimum of clear academic standing (as defined by the University) in the previous scholarship year. The award shall be made by the Senate Committee on Undergraduate Scholarships and Financial Aid, on the recommendation of the Department of French and Spanish.

**THE MURIEL H. HUNTER AWARD IN SPANISH**

This award, valued at \$600.00, is awarded out of income derived from a bequest to the University by the late Mrs. Muriel H. Hunter, wife of the late Dr. A.C. Hunter and former Lecturer in Spanish at the Memorial University College. The award shall take the form of a travel grant to a student, in second year or beyond, majoring or minoring in Spanish who wishes to pursue a program of study of one or more semesters' duration, in Spanish or Spanish-American language, literature or culture, at a recognized institution in metropolitan Spain or Latin America. Eligibility for this award requires a minimum of clear academic standing (as defined by the University) in the previous scholarship year. The award shall be made by the Senate Committee on Undergraduate Scholarships and Financial Aid, on the recommendation of the Department of French and Spanish.

**THE H.H. JACKSON TRAVEL SCHOLARSHIP IN GERMAN**

This scholarship was established upon the retirement of Dr. Herbert H. Jackson, Professor Emeritus and first Head of the Department of German and Russian from 1967 to 1980, through the generosity of his colleagues and students. The scholarship has a minimum value of \$500.00 and is awarded annually by the Senate Committee on Undergraduate Scholarships and Financial Aid, upon the recommendation of the Department Head, to a candidate who has completed at least the second year of study at Memorial University of Newfoundland, has demonstrated a high level of academic performance in German, and is planning to undertake a program of studies and/or work assignment in a German-speaking country.

**THE ARTHUR AND SONIA MAY SCHOLARSHIP**

The scholarship, which is expected to be between \$4,000 and \$5,000 (based on the annual interest on its endowment), has been established by Arthur and Sonia May on the occasion of the University's 50th Anniversary as a degree granting institution, and in gratitude for the outstanding experience they enjoyed as students. It will be awarded to a student who has completed at least two years of a degree program at Memorial University of Newfoundland and who has been accepted to attend a recognized university outside Canada for one or two semesters of study for transfer credit to Memorial University of Newfoundland towards completion of his/her undergraduate degree. Applications may be made to the Scholarships and Awards Office, Room 4018, University Centre on or before March 31.

**THE DR. M.O. AND GRACE MORGAN HARLOW BURSARY**

This bursary, valued at a portion of the annual accrued interest on an endowment to Memorial University of Newfoundland from the estate of Dr. and Mrs. Morgan, was established to encourage and assist undergraduate students to attend the University's Harlow Campus. It is open to full-time Memorial University of Newfoundland students attending the Harlow Campus. Up to three bursaries of equal value will be awarded annually to two students in the Faculty of Education (one each in the Spring and Fall semesters) and one to a student in any field of study (in the Winter semester). An application is required to identify those students planning to attend Harlow in the winter semester only and may be obtained from the Scholarships and Awards Office, Room 4018, University Centre. Bursaries awarded in fall and spring will be based on a recommendation from the Dean, Faculty of Education. These bursaries will be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid.

**THE RHODES SCHOLARSHIP**

A Rhodes Scholarship is tenable at the University of Oxford and may be held for three years. Since, however, the majority of Rhodes Scholars obtain standing which enables them to take a degree in two years, appointments are made for two years in the first instance. Scholars may, however, hold the Scholarship for only 1 year. Those Scholars who elect to read for a DPhil at the time of admission may apply for a third year on stipend. The Rhodes Scholar must present a definite plan of study for that period satisfactory to his/her College and to the Rhodes Trustees. A Rhodes Scholar may apply to any one of the courses of study available at the University of Oxford, subject to the consent of the college or, in the case of graduate study, the relevant faculty or department.

The stipend of a Rhodes Scholarship consists of a direct payment to the University and to the Scholar's College of approved fees (such as matriculation, tuition, laboratory fees, and certain other set charges), plus a maintenance allowance, which is paid directly to the Scholar at the rate of at least £3,480 per annum to cover board, lodging and other expenses. The sum provided should be sufficient to enable a Scholar to meet the necessary expenses for term-time and vacations, but those who can afford to supplement it to a modest extent from their own resources are advised to do so. Reasonable travel expenses to and from Oxford will be paid by the Trust.

Application forms containing full particulars can be obtained from the Secretary of the Selection Committee for the Province of Newfoundland or from the Scholarships and Awards Office at Memorial University of Newfoundland. Inquiries may be directed in writing to the Secretary of the Selection Committee to Dr. S. Ann Colbourne, 88 Hugh's Pond Road, Portugal Cove-St. Philips, NL, A1M 2C6, by telephone to (709) 777-5219, by fax to (709) 777-5849, or email to acolbourne@nl.rogers.com.

#### **DR. EDMUND de ROTHSCHILD HARLOW TRAVEL BURSARY**

This bursary was established to enhance the student's educational experience while studying at Memorial University of Newfoundland's Harlow Campus, by providing funds to defray cost of travel and field work. Travel bursaries valued at a portion of the accrued interest on the endowment to a maximum of £250.00 will be awarded to full-time, undergraduate students registered at the Harlow Campus in a program approved by Memorial University of Newfoundland. The bursary will be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid and will be based on need. Eligibility for a bursary requires a minimum overall cumulative GPA of 2. Application forms are available in-person or by writing the Scholarships and Awards Office, Room 4018, University Centre, Memorial University of Newfoundland, St. John's, NL, A1C 5S7, or by telephone to (709) 737-3956. Applications must be accompanied by a letter of recommendation from a faculty member, including confirmation that the travel is in support of the approved program.

#### **TRAVEL MANAGEMENT HARLOW SCHOLARSHIP**

This scholarship, valued at \$200.00 per semester, was established by Travel Management to assist Education students from Memorial University of Newfoundland who wish to pursue their studies at the Harlow Campus in Harlow England. It is available only to students in the Faculty of Education who attend the Harlow Campus and will be awarded on the basis of scholarship standing and need. It will be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid upon the recommendation of the Dean, Faculty of Education.

## **7 Government of Newfoundland and Labrador Scholarships**

### **7.1 For Students Graduating From High School**

The following awards are made available by the Government of Newfoundland and Labrador and are awarded by the Minister of Education upon the recommendation of a scholarship committee appointed by the Lieutenant-Governor in Council. They are awarded to high school graduates on the basis of the Department of Education's scholarship score.. Principals of all high schools should be contacted for further information:

#### **a. The Junior Jubilee Scholarship**

This scholarship has a value of \$2,500.00. It is awarded annually to the high school graduate who attains the highest marks in the scholarship examination.

#### **b. The Electoral District Scholarships**

These scholarships of the value of \$1,000.00 each are awarded annually to high school graduates who attain the highest marks in the scholarship examinations in the electoral districts where the students reside.

#### **c. The Centenary of Responsible Government Scholarships**

Fifty-five scholarships valued at \$1,000.00 each may be awarded to high school graduates who attain the highest marks in the scholarship examination provided they have not already been awarded another government scholarship.

#### **d. Constable W.C. Moss Scholarship**

This scholarship has a value of \$1,000.00. It is awarded annually to a son or daughter of a member of the Royal Newfoundland Constabulary, or of the Royal Canadian Mounted Police, who has been a resident of the Province for twelve months, or of a retired or deceased member of either of these Forces. This scholarship is awarded on the basis of a scholarship examination to high school graduates. Applications are necessary and are available from high school principals or from the Secretary, Scholarship Committee, Department of Education, Confederation Building, St. John's.

### **7.2 For Undergraduate Students in Attendance at Memorial University of Newfoundland**

#### **a. The Centenary of Responsible Government Scholarships**

The Government of Newfoundland and Labrador awards these scholarships, valued at \$1,000.00 each, to students pursuing their first undergraduate programs. These scholarships are awarded by the Minister of Education on the recommendation of a scholarship committee appointed by the Lieutenant-Governor in Council. They are awarded on the basis of academic achievement and no application is necessary.

#### **b. The Senior Jubilee Scholarship**

The Senior Jubilee Scholarship to the value of \$3,000.00 may be awarded annually by the Minister of Education upon the recommendation of the scholarship committee appointed by the Lieutenant-Governor in Council to the student at the University who attains the highest average in the examinations held during the first two semesters of the second academic year.

#### **c. The Doctor Arthur Barnes Scholarship**

##### **The Doctor William W. Blackall Scholarship**

##### **The Doctor Vincent P. Burke Scholarship**

##### **The Reverend Doctor Levi Curtis Scholarship**

##### **The Ronald K. Kennedy Scholarship**

These scholarships, awarded by the Government of Newfoundland and Labrador, each have the value of \$1,200.00. The scholarships are awarded annually by the Minister of Education upon the recommendation of the scholarship committee appointed by the Lieutenant-Governor in Council to students who have completed two years of a degree or diploma course at the University. In recommending students for the awards, the committee will take into account scholastic achievement and promise, qualities of character, economic need and any other relevant factors. Normally these scholarships are tenable at Memorial University of Newfoundland but in special circumstances may be held elsewhere.

The values of the above awards are subject to change.

## 8 Scholarships, Bursaries, and Awards Administered By Other Authorities

### ASSOCIATION OF REGISTERED NURSES OF NEWFOUNDLAND

- a. **Bachelor of Nursing Program Scholarship** - \$500.00. Criteria: Must be a full-time student enrolled in the Bachelor of Nursing program with a 75% average in completed university credit courses, excluding first year. Deadline date for application is September 30.
- b. **Bachelor of Nursing (Post-RN) Program Scholarship** - 2 Scholarships of \$1000.00. Criteria: Must be a full-time student with a minimum of 70% average in completed university courses and be a 'member in good standing' with the ARNN and a current member of the ARNN Education & Research Trust. Deadline date for application is September 30.
- c. **Mona Fisher Cancer Nursing Scholarship** - \$1000.00. Criteria:
  - i. Must be a full-time student who has completed either the 3rd year of the Bachelor of Nursing Program or of the 1st year Bachelor of Nursing (Post-RN) Program.
  - ii. Must have a minimal 75% average in the 3rd year of the BN Program or the 1st year of the Bachelor of Nursing (Post-RN) Program.
  - iii. Must be interested in Oncology Nursing.
  - iv. Must be recommended by the School of Nursing.
 The deadline date for application is September 30.
- d. **ARNN Chapter Scholarships** - \$200.00 to \$300.00. Most Chapters or regional branches of the ARNN provide scholarships for nursing students from their region. Interested students should contact the in writing to The Association of Registered Nurses of Newfoundland, P.O. Box 6116, St. John's, NL, A1C 5X8, or by telephone to (709) 753-6040, or their local chapter.

### THE BAXTER CORPORATION - JEAN GOODWILL SCHOLARSHIP

Two \$5,000 scholarships sponsored by Baxter Corporation, are awarded annually, and are administered by the Association of Indian and Inuit Nurses of Canada. The aim of the scholarships is to encourage nurses of Indian and Inuit ancestry who intend to serve in the Northwest Territories or Yukon, by helping them obtain the specialized knowledge they will require.

Consideration will be given to applicants of Indian and Inuit ancestry who intend to serve in the North, including:

- a. Students who are graduating from a registered nurses' course and are accepted into one of the following specialized training programs:
  - i. community health nursing,
  - ii. outpost nursing,
  - iii. midwifery;
- b. Graduate nurses already serving in isolated communities, who are accepted into one of the specialized training programs listed above;
- c. Those who are or will be enrolled in a Bachelor level nursing program.

The successful applicant must provide documentation of his/her efforts to secure employment in isolated northern native communities.

Completed applications must be received by the President of the Indian and Inuit Nursing of Canada by July 1 each year. Successful candidates will be notified by August 1. Further information may be obtained by writing to President Aboriginal Nurses Association of Canada, 55 Murray Street, 3rd Floor, Ottawa, Ontario K1N 5M3 or by telephone to (613)230-1864 or by fax: to (613)230-1542.

### THE BISHOP SPENCER COLLEGE ALUMNAE ASSOCIATION SCHOLARSHIP

The Bishop Spencer College Alumnae Association will be awarding one \$1,000.00 (Canadian) Scholarship per each academic year for post-secondary studies at an accredited post-secondary institution. The program of studies must be a minimum of two years duration or an equivalent period of studies and is not limited to the first year of studies.

The scholarship will be available to either a former student of Bishop Spencer College, St. John's (as defined by the constitution of the BSCAA), **OR** any female relative of a former student of Bishop Spencer College, St. John's **OR** any other female person as deemed qualified by the Scholarship Committee.

Application forms and/or further information may be obtained in writing to Bishop Spencer College Alumnae, Association Scholarship, P.O. Box 39111, St. John's, NL, A1E 5Y7 or by email to bscaas@hotmail.com.

### THE PATRICIA BLACKBURN MEMORIAL BURSARY FUND

This fund has been established at Sir Wilfred Grenfell College, Memorial University of Newfoundland, in memory of Patricia Blackburn and her grandson Erik Blackburn. The annual income is to be used at the discretion of the Principal to facilitate or improve the educational opportunities of deserving young people from rural Newfoundland & Labrador. The fund will assist one or more promising students who would otherwise be unable to attend or to continue university.

### THE BRISTOL LABORATORIES OF CANADA PRIZE

This prize of \$200.00 is to be used for the purchase of Medical books. It is to be awarded to a first-year medical student on the basis of academic performance as well as the interests and the needs of the student. Works on Pharmacology and Therapeutics will ordinarily be included in the books selected. The award is made by the Dean of Medicine's Advisory Committee on Awards, Bursaries and Scholarships.

### CALDER SCHOLARSHIP

The Calder Scholarship, valued at \$500.00 has been created by the Town of Burgeo to honour Drs. Mike and Ann Calder for their combined sixty years of service to the town. It will be awarded annually to a student who has graduated from a school in Burgeo, who is enrolled in a post-secondary program of studies which leads to a career in the health care field. Students must apply, prior to November 30, on an application form provided by the Town of Burgeo. Students in any year of their programs may apply.

### CAL CALLAHAN MEMORIAL BURSARY

Each year this Association offers a bursary, or bursaries, totalling six thousand dollars (\$6,000.00) to sons, daughters, or legal wards of persons who derive their principal income from the Pipeline Industry and whose employers are Members of this Association.

The purpose of these bursaries is to give financial assistance to students who are beginning undergraduate studies in a full program leading to a Degree or Certificate in any field, at a recognized University or College in Canada. Selection will be made by the Executive Committee, based upon scholastic record and financial need, provided the applicant otherwise qualifies.

Applications may be obtained from the Pipe Line Contractors Association of Canada, Suite 720, 5915 Airport Road, Mississauga, Ontario, L4V 1T1, and must be returned by not later than September 30th accompanied by a receipt or other proof of enrollment.

**CANADIAN ARMED FORCES UNIVERSITY TRAINING PLANS**

Selected students may qualify for financial assistance through these Canadian Armed Forces University Training Plans: the Regular Officer Training Plan (ROTP); the Regular Officer Training Plan (ROTP-Coop, M.U.N. only); the Dental Officer Training Plan (DOTP); the Medical Officer Training Plan (MOTP); and the Reserve Entry Scheme- Officers (RESOP). Full details may be obtained in writing from The Canadian Forces Recruiting Centre, Government of Canada Building, 354 Water Street, St. John's, NL, A1C 1C4 or The Canadian Forces Recruiting Detachment, Herald Towers Building, Suite 407, 4 Herald Avenue, Corner Brook, NL, A2H 4B4.

**CANADIAN FOUNDATION FOR PHARMACY FELLOWSHIPS AWARD (NATIONAL AWARD)**

The Canadian Foundation for Pharmacy Fellowships Award is made to nine senior Canadian pharmacy students. The award is provided to encourage excellence within the profession of pharmacy and is made possible by the annual contributions of practicing pharmacists and pharmacy-related businesses who share a vision of progress.

**CANADIAN FOUNDATION FOR PHARMACY PAST PRESIDENTS' AWARD (NATIONAL AWARD)**

The Canadian Foundation for Pharmacy Past Presidents' Award is made annually to the most outstanding pharmacy student in a Canadian university and is based on scholarship, on contributions to undergraduate life and on the likelihood of future noteworthy contributions to the community and the profession.

**THE CANADIAN GERONTOLOGICAL NURSING ASSOCIATION**

Sancella/CGNA Nursing Scholarship - 2 awards of \$1000.00. The purpose is to provide support to outstanding Registered Nurses undergoing further education in either an undergraduate nursing degree program, or a post graduate degree program that is relevant to career development in the field of Gerontological Nursing.

The candidate must:

- Be a member of the Canadian Gerontological Nursing Association.
- Be registered to practise nursing in a Canadian Province.
- Have gained acceptance to a suitable full-time program in a recognized educational institution at the time of taking up the award.
- Exhibit interest in and potential for, a career in Gerontological nursing in Canada.
- Be a Canadian citizen or landed immigrant at the time of taking up the award.

The scholarship is administered by the CGNA and further information regarding criteria can be obtained by writing to CGNA, c/o Nancy Bol, Parkwood Hospital, 801 Commissioners Rd. E., London, Ontario N6C 5J1.

**CANADIAN HYDROGRAPHIC ASSOCIATION AWARDS**

A sum of two thousand dollars (\$2,000.00) will be awarded to a full time student in second year of a science or survey program at a bona fide university or a technological college in Canada. The award is intended to assist a deserving student in financing his/her education in a field related to survey sciences. The award will be made annually to the student judged the most deserving based on the information contained in the applications received. The applications are available from the Canadian Hydrographic Association, Institute of Ocean Sciences, 9860 West Saanich Road, Sidney, B.C. B8L 4B2, Attention: Barry M. Lusk. C.L.S.

**CANADIAN LUNG ASSOCIATION FELLOWSHIP/ RESEARCH GRANT PROGRAM**

From funds provided by the Christmas Seal Campaign, fellowships and research grants are awarded by the Canadian Lung Association on recommendations from the Canadian Thoracic Society, Canadian Nurses' Respiratory Society, and Physiotherapy Section.

Through the Canadian Thoracic Society, fellowships are awarded to physicians or to those holding doctorate degrees in the health sciences for periods of research training in the area of respiratory disease.

Through the Canadian Nurses' Respiratory Society, fellowships and research grants are awarded in the area of respiratory nursing at the Master's or post-Master's level.

The Physiotherapy Section of the Canadian Lung Association offers fellowships to physiotherapists pursuing post-graduate training, with respiratory research as the major component.

Information and application forms may be obtained in writing to Canadian Lung Association, 75 Albert Street, Suite 908, Ottawa, Ontario, K1P 5E7.

**CANADIAN NURSES FOUNDATION SCHOLARSHIPS & FELLOWSHIPS COMPETITION**

Scholarships and fellowships are awarded to nurses pursuing education at the baccalaureate, master and doctoral levels. In addition to non-specific studies, awards are available for specific area of practice such as northern nursing, occupational health, dialysis nursing, neurological nursing, oncology nursing, community health, gerontology nursing, paediatric nursing and nursing administration.

Applications must be members of CNA and CNF, be Canadian citizens and agree to work in Canada for a period of one year for each year of financial assistance. Application forms are available from their website [www.canadiannursesfoundation.com](http://www.canadiannursesfoundation.com) or in writing to Canadian Nurses Foundation, 50 Driveway, Ottawa, Ontario K2P 1E2 or by telephone to (613)237-2133 or by fax to (613)237-3520.

**CANADIAN SOROPTIMIST GRANTS FOR WOMEN - \$5,000.00**

This grant is available to female students pursuing a course of studies leading to a career of service to people who are in their final year of a four year undergraduate program. Further information may be obtained in writing to Soroptimist Foundation of Canada, c/o Doreen Dodd, St. Paul's College, Westmount Rd., N., Waterloo, Ontario N2L 3G5.

**THE CANADIAN UNION OF PUBLIC EMPLOYEES, LOCAL 1516, SCHOLARSHIPS**

CUPE Local 1615 offers five scholarships annually valued at \$500 each. The scholarships are available to students entering or already in a program of study at Memorial University of Newfoundland or a two-year program at any other recognized institution in St. John's or Corner Brook, who are children of CUPE Local 1615 members. The scholarships are awarded by the CUPE Scholarship Committee on the basis of academic ability only. Application forms are available from the CUPE Local 1615 Scholarship Committee.

**THE CANQUA '95 UNDERGRADUATE RESEARCH AWARDS**

The national meeting of the Canadian Quaternary Association (CANQUA) was hosted by Memorial University of Newfoundland in 1995. As part of the legacy of that meeting, CANQUA is pleased to announce the creation of an undergraduate research award in Quaternary studies at Memorial University of Newfoundland. The award, valued at \$200, is intended to support honours thesis research in any discipline related to the Quaternary Period. Two additional awards of one-year membership in CANQUA (including journal Subscription) will be granted in the same competition. Candidates will be selected on the basis of a submitted research proposal and academic excellence. Application forms and guidelines are available from, and should be submitted to, the Geography Department. Deadline date for submission of applications is March 31.

**CHILDREN OF WAR DEAD (EDUCATION ASSISTANCE) ACT**

This Act provides fees and monthly allowances for children of veterans whose death was attributable to military service. Inquiries should be directed to the nearest District Office of the Department of Veterans Affairs.

**CIBA STUDENT AWARD**

The CIBA collection of medical illustrations provided by CIBA Pharmaceuticals is presented annually to the first-year student showing the most promise in the field of Anatomy. The award is made by the Dean of Medicine's Advisory Committee on Awards, Bursaries and

Scholarships.

#### **THE CO-OP ATLANTIC MCEWEN SCHOLARSHIP**

To honour the memory of Wesley H. McEwen, Co-op Atlantic annually offers two university entrance scholarships of \$1000.00 each per year, available to a student for up to four years. The awards help deserving students reach their educational goals and are designed to improve understanding and knowledge of co-operation and co-operatives. Applicants must be (a) a full-time employee, or the dependent of a full-time employee, of Co-op Atlantic or one of its member co-operatives; or (b) dependents of members or members of member co-operatives of Co-op Atlantic. Further information may be obtained in writing to The Manager, Corporate Administrative Services, Co-op Atlantic, P.O. Box 750, Moncton, New Brunswick E1C 8N5.

#### **THE DONALD E. CURREN SCHOLARSHIPS**

These scholarships (four of \$1000.00 each and four of \$500.00 each) are open to mobility impaired students who have been accepted by a university in the Atlantic Provinces, with preference to paraplegics and quadriplegics. The scholarships will be awarded on merit, and on such other criteria as the Selection Committee may determine. Recipients must be Canadian citizens or landed immigrants, and residents of the Atlantic Provinces. Application deadline is July 15. Application forms may be obtained in writing to Donald E. Curren Scholarship Fund, c/o Canadian Paraplegic Association, Nova Scotia Division, 5599 Fenwick Street, Halifax, Nova Scotia B3H 1R2.

#### **EPILEPSY NEWFOUNDLAND AND LABRADOR**

##### **a. THE JIM HIERLIHY MEMORIAL SCHOLARSHIP**

This scholarship, valued at \$1000, will be awarded annually to an undergraduate student at any post-secondary institution in Canada or the United States, who have diagnosed epilepsy and are a member in good standing of Epilepsy Newfoundland and Labrador, at the time of scholarship application. Evaluations will be based on a combination of the applicant's grades, extracurricular activities, and financial aid.

##### **b. THE MATURE STUDENT SCHOLARSHIP**

This scholarship, valued at \$1000, will be awarded annually to an undergraduate student at any post-secondary institution in Canada or the United States, who is at least 21 years of age, who has diagnosed epilepsy and is a member in good standing of Epilepsy Newfoundland and Labrador, at the time of scholarship application. Current board or staff members are not eligible to apply for these scholarships. Former board or staff members and /or their family members can apply, if they have been out of the service of Epilepsy Newfoundland and Labrador for two years. This two year period will be calculated as two years prior to the scholarship award date.

Award holders must be prepared to enter or be currently entered in a post-secondary training institution in the academic year of application. Scholarship applications must be received by Epilepsy Newfoundland and Labrador no later than November 1st of the academic year. Notification of award will be made no later than November 15th. The award holder must submit to Epilepsy Newfoundland and Labrador confirmation of admission or enrollment as soon as possible after selection, but not later than January 15th of the academic year. The successful applicant should be available, in person, to receive their award at a formal presentation.

Further information, memberships or applications may be obtained in writing to Epilepsy Newfoundland and Labrador, 261 Kenmount Road, St. John's, NL, A1B 3P9 or by telephone to (709) 722-0502, or by fax to (709) 722-0999, or by e-mail: epilepsy@nf.aibn.com, or through the website at www.nfld.net/epilepsy.

#### **TERRY FOX HUMANITARIAN AWARD PROGRAM**

This program is intended to encourage Canadian youth to seek the high ideals represented by Terry Fox, by the granting of commemorative scholarships for the pursuit of higher education. The value of each award is \$3000.00 annually for a maximum of four years or until a first degree is obtained. Selection criteria for recipients will be based on demonstration of the highest ideals and qualities of citizenship and humanitarian service while in pursuit of excellence in their academic, amateur sport, fitness, health, community service and related endeavours. Deadline for the submission of applications is February 1st. Applications are available in writing to Terry Fox Humanitarian Award Program, Simon Fraser University, 8888 University Drive, Burnaby, BC V5A 1S6 or by fax to (604) 291-3311.

#### **CHARLES E. FROSST MEDICAL SCHOLARSHIP**

This scholarship, valued at \$1,000.00, will be awarded at the end of the fourth year to the student who, in the opinion of the Dean of Medicine's Advisory Committee on Awards, Bursaries and Scholarships, has shown the most promise in the field of Therapeutics. A suitably inscribed bronze medal is also presented to each year's winner.

#### **GLAXO/HARLOW AWARD IN CLINICAL PHARMACY**

Galxo Canada Inc. offers \$2,500.00 annually which provides travel expenses allowing two students each year to undergo the last rotation of their clinical clerkship in London, England. Students reside at Harlow Campus. Students must apply for this award. Applicants are selected on the basis of academic achievement as well as their performance on a required assignment. The award is not given to an applicant if all criteria for the award are not met. The selection will be made by clinical faculty, School of Pharmacy.

#### **GLORY OF MOZART CHAMBER MUSIC TRAVEL BURSARY**

This award was established by the 1991 St. John's International Mozart Chamber Music Competition Committee.

The award will be available to students enrolled in the Bachelor of Music degree program who are participating as members of a chamber ensemble at an event of major musical importance outside the province. The bursary will be used to assist with travel and other expenses involved in attending the event. Musical ability, academic standing, financial need and the benefits to the students from attending the event may be taken into account in making the award. The value of the award will be based on the interest income accruing on the capital sum in the fund. Applications for this award should be submitted in writing to the Director of the School of Music.

#### **THE FORD HEWLETT MEMORIAL ONCOLOGY SCHOLARSHIP**

A scholarship, valued at \$1000, has been established by the Canadian Cancer Society, in memory of Mr. Ford Hewlett of Springdale, Newfoundland, who was a very dedicated volunteer of the Society. The scholarship is awarded annually to a third year medical student who has demonstrated interest in the field of research or clinical oncology.

#### **S.R. HUSSEY MEMORIAL SCHOLARSHIP FUND**

This fund was established some years ago by the Canadian Council of the Blind Clubs of the Atlantic region for the purpose of assisting registered blind students in continuing their education.

The fund is available to registered blind students in the Atlantic region who are attending a recognized university. The fund is also available to assist the children of registered blind persons.

Blind students interested in making application for assistance from this fund should contact the nearest office of the Canadian National Institute for the Blind for further information.

#### **IMPERIAL TOBACCO CANADA SCHOLARSHIP FUND FOR DISABLED STUDENTS**

Purpose: To encourage young Canadian disabled students to pursue university studies with the ultimate objective of obtaining a university degree.

Field of study: Undergraduate program in any field of study.

Value: Each scholarship is valued at \$1500.00 annually.

Number: Minimum 5.

Duration: One academic year - may be renewable upon application.

Conditions: Candidates must be disabled according to the following 1975 United Nations Declaration:

A disabled person is "any person unable to ensure himself or herself wholly or partly the necessities of a normal individual and/or social life, as a result of a deficiency, either congenital or not, in his or her physical or mental capabilities."

Candidates must be Canadian citizens.

Candidates must have successfully completed the schooling requirements or equivalent for admission to an undergraduate program of study, or be presently registered as a full-time undergraduate student as defined by the University, and have successfully completed the last academic year.

Candidates must not be employees or franchisees, or dependents of employees or franchisees of Imasco or any of its subsidiaries.

Where tenable: At any Canadian university which is a member of, or affiliated to a member of the AUCC.

Further information: Additional information and application forms may be obtained in writing to The Awards Officer, Canadian Awards Section, Association of Universities and Colleges of Canada, 151 Slater Street, Ottawa, Ontario K1P 5N1.

Completed applications in duplicate are to be returned to AUCC not later than June 1st.

#### **IMPERIAL OIL LTD. HIGHER EDUCATION AWARDS (FOR SONS AND DAUGHTERS OF EMPLOYEES AND ANNUITANTS)**

The Higher Education Awards program provides full tuition and compulsory fees for sons and daughters of Imperial Oil Ltd. employees, annuitants, or deceased employees. Students must be accepted at any approved Canadian University or Community College. The student must begin their education within six years of starting secondary school (grade 9), and must have an average of at least 70% in the subjects required for admission by the institution. Students who do not qualify upon graduation from secondary school may be eligible should they achieve the equivalent of a 70% average while in post secondary education. Once an award is granted, the student must pass all subjects and complete a "full workload" each year. A student may qualify for up to four awards in a five year period, which begins when the student first starts post secondary education.

Application forms and brochures explaining the program in more detail are available in writing to Administrative Management Services, Awards Division, P.O. Box 414, Pickering, Ontario L1V 2R6 or by telephone to (416)420-0642 or by fax: to (416)420-2516 or through the website at [www.iga.nf.net](http://www.iga.nf.net).

#### **INDIAN AND INUIT HEALTH CAREERS PROGRAM**

Medical Services Branch of Health and Welfare Canada provides Bursary and Scholarship Awards for Indian and Inuit Health Careers. This program encourages and assists students of Indian and Inuit ancestry to pursue educational opportunities leading to professional health careers.

Application forms and further information available at the Scholarship and Awards Office, Room 4018 (University Centre) or by calling (709) 737-3956.

#### **THE INTERNATIONAL GRENFELL ASSOCIATION SCHOLARSHIP PROGRAM**

A number of scholarships and awards are available to students resident in the region served by the Grenfell Regional Health Services:

a. **The IGA Scholarships (three at \$3000.00 per semester for up to four years)**

Two of these awards are available to high school graduates upon entrance to a degree-granting institution; application deadline date January 31. One award is reserved for undergraduate students already in attendance at a university; application deadline date May 15. These awards may be renewed if scholarship standing is maintained (at 70% or better).

b. **The IGA Bursary Fund Awards**

Discretionary awards of not more than \$2000.00 each are available for study at community colleges, technical institutes and universities to students qualifying on the basis of academic achievement, industry, potential and financial need. Applications may be submitted prior to May 15. A special bursary of \$3000.00 to a mature student, out of high school five years or more, is also available.

Application forms and further information are available in writing to Mr. Paul Canning, General Business and Grant Programs, International Grenfell Association, 66 Birmingham Street, St. John's, NL, A1E 5M8, or by telephone to (709) 745-6162 or by fax to (709) 745-6163, or by email to [iga@nflid.net](mailto:iga@nflid.net).

#### **KIN CANADA BURSARIES**

Applicants to the Kin Canada Bursaries must be Canadian citizens or landed immigrants and must be full-time students in the process of graduating from high school, or currently studying or registered at a post-secondary institution. Anyone interested in applying for these bursaries may use the standard application form available at [www.bursary.ca](http://www.bursary.ca) and submit it to the Kinsmen, Kinette or Kin Club nearest your permanent residence by February 1st. Disbursements take place in May.

#### **THE LEONARD FOUNDATION SCHOLARSHIPS**

Additional Application Forms are available in writing to Grace Singh, Secretary, The Leonard Foundation, c/o The Canada Trust Company, 20 Eglinton Avenue West, Toronto, Ontario M4R 2E2, or by telephone to (416) 361-8745, or by fax to (416) 361-8753, or Scholarships & Awards Office, Room 4018, University Centre, Memorial University of Newfoundland, or by telephone to (709) 737-3956, or by fax to (709) 737-2347.

#### **GERRY LYNCH MEMORIAL SCHOLARSHIP**

This scholarship, valued at \$3,000.00, is awarded annually at the NLMA annual meeting to a graduating Memorial University of Newfoundland Medical student in good standing. Applicants are required to write a research paper of 1500-2000 words on a topic selected each Fall by the NLMA Board of Directors. The scholarship is administered by the Canadian Medical Foundation and will be available in perpetuity.

#### **THE MERCK FROSST AWARD**

Merck Sharp & Dohme Canada Limited provides an annual award of \$1,000.00 (or, when necessary, two awards of \$500.00 each) to a third-year student of each Canadian medical school. This award is intended to recognize the efforts of the medical student who has shown the most promise in the field of Therapeutics. A copy of the current edition of the Merck Manual will be offered together with the monetary prize. The awards are made by the Dean of Medicine's Advisory Committee on Awards, Bursaries and Scholarships

#### **THE DR. LEONARD A. MILLER AWARD**

This award, in memory of Dr. Leonard A. Miller, is given annually to the most outstanding student in the study of Community Medicine. The award, in the amount of \$500.00, is funded jointly by the Faculty of Medicine and the General Hospital. The selection of the recipient for the award will be made at the completion of first year medical studies. The award is made by the Dean of Medicine's Advisory Committee on Scholarships, Awards and Bursaries.



**THE NATIONAL SEA PRODUCTS LIMITED SCHOLARSHIPS**

Five university entrance scholarships valued at \$1500.00 each are made available annually by National Sea Products Limited. The awards are open to children of permanent employees of the company or its wholly-owned subsidiaries, and to children of crew members of the company's offshore trawlers who have been employed with the company for at least twelve months. Further information and application forms are available in writing to The Awards Officer, National Programs Division, Association of Universities and Colleges of Canada, 151 Slater Street, Ottawa, Ontario K1P 5N1.

**THE NATURAL MEDICINES COMPREHENSIVE DATABASE RECOGNITION AWARD**

This award is presented to an outstanding graduate who has shown an interest in evidence-based approach to patient care, in particular when considering natural medicines. The winner receives the current edition of the Natural Medicines Comprehensive Database Book, access to the Database online, complimentary enrollment in the Natural Medicines Comprehensive Database continuing education series, and an award certificate.

**NEWFOUNDLAND LIGHT & POWER CO. LIMITED EMPLOYEES' ASSOCIATION SCHOLARSHIPS**

Sons and daughters of Newfoundland Light & Power Co. Limited employees and certain other relatives of single employees, may apply for the above scholarships if they intend to pursue post-secondary study. In applying, applicants should note that employees must be members of the Newfoundland Light & Power Co. Limited Employees' Association and regular contributors to its Scholarship Fund. Applications and information are available in writing to Employees' Association, Newfoundland Light & Power Co. Limited, P.O. Box 8910, Kenmount Road, St. John's, NL, A1B 3P6.

**NEWFOUNDLAND MEDICAL ASSOCIATION AWARDS**

The Newfoundland Medical Association will make two awards of \$1,000.00 available to students at the end of second year of medical studies. These awards are intended to recognize potential interest in the organizational aspects of the profession of medicine as judged by the contribution made by the student to the governance of the medical school. While academic excellence is not the main criterion, recipients should be in good academic standing. The recipient should be identified to the Executive of the Association for approval upon recommendation by the Dean of Medicine's Advisory Committee on Awards, Bursaries and Scholarships.

**NEWFOUNDLAND PHARMACEUTICAL ASSOCIATION SPECIAL AWARD**

A special award, The R.J. Harris Memorial Trust Award, is made by the Newfoundland Pharmaceutical Association at its Awards Luncheon each year. The value of the award represents the interest from the Trust. The award is available to students in any year of the Pharmacy program who require financial assistance.

**THE OCEAN RANGER SCHOLARSHIPS AND BURSARIES**

To commemorate the tragic loss of the 84 crew members of the Ocean Ranger on February 15, 1982, a scholarship and bursary program has been established by the Ocean Ranger Disaster Fund. These awards, valued at \$500.00 per year, are tenable at Memorial University of Newfoundland, the Fisheries and Marine Institute, and the College of the North Atlantic to students who are entering or pursuing a post-secondary program of studies at one of these three institutions. In selecting candidates, preference will be given to the daughters, sons and/or widows of those who were lost. In the absence of eligible candidates from this group, the scholarships and bursaries may be awarded to other students at the discretion of the Ocean Ranger Scholarship Committee. Information and application forms may be obtained from the Office of Student Affairs at any of the institutions noted above.

**THE PERRIGO AWARD FOR EXCELLENCE IN NON-PRESCRIPTION STUDIES**

An annual award, consisting of US\$200 and a plaque, is to be given to the third year student with the highest academic standing in the Therapeutics 4104 course in the Pharmacy program. This is awarded on the recommendation of the Director, School of Pharmacy.

**THE GREGORY J. POWER POETRY AWARDS**

The proceeds from a sum of money donated to the University by Mr. Gregory J. Power will (depending on the merit of submissions) be awarded as first, second, and third-place prizes in an annual poetry competition administered by the Department of English, Memorial University of Newfoundland. The competition will be open to full or part-time students at the University upon submission of original, unpublished work. The selection of winners will be the responsibility of the Head, Department of English, acting on the advice of a special committee. Entry forms and further information may be obtained by contacting the Department of English.

**PRIZE IN PSYCHIATRY**

To be awarded by the Psychiatry Department to the most outstanding student in Psychiatry in the Clinical Clerkship Year (Third-Year Medical Studies).

**THE PRO VICE-CHANCELLOR'S PRIZE**

The Strategic Framework for Memorial University of Newfoundland states that Memorial will enrich undergraduate education by helping students to experience the excitement of intellectual discovery, introducing undergraduates more effectively to the wider academic enterprise. In encouragement of this objective and in recognition of superior writing and scholarship by undergraduate students that deserves a wider audience, the Vice-President (Academic) and Pro Vice-Chancellor has established a series of prizes for the best undergraduate scholarship done each year at the University.

Instructors are invited to nominate examples of their undergraduate students' course work for the Pro Vice-Chancellor's Prize. The professor will certify that the work is original and the student's own work, and submit it to his/her head/director who will transmit it to the committee. Students may also submit their own course work for consideration. Instructors' comments should not appear. In accepting nomination or making application, students agree to publication.

Nominations and applications will be assessed by a selection committee consisting of five academic staff members and chaired by the Associate Vice-President (Academic). The committee will adjudicate entries for their intellectual originality, cogency, facility of expression, and adherence to principles of scientific inquiry and critical thinking.

The value of the prize is \$500 cash or a \$1000 scholarship tenable in a graduate program at Memorial University of Newfoundland. Up to five prizes will be awarded each year. At the discretion of the selection committee, honorable mention may be accorded to entries beyond the available number of prizes.

**RIXON RAFTER SCHOLARSHIP FUND**

This fund was established in memory of Rixon Rafter, a former student of the Ontario School for the Blind, who became a successful newspaper owner in Ontario. Awards from this fund are intended to supplement, but not replace assistance available to students from existing sources. The amount granted to students from this fund is determined by the Rixon Rafter Scholarship Committee and financial need is taken into consideration. Registered blind students may request assistance from the fund by contacting the nearest Canadian National Institute for the Blind office in their area.

**THE RHODES SCHOLARSHIP**

A Rhodes Scholarship is tenable at the University of Oxford and may be held for three years. Since, however, the majority of Rhodes Scholars obtain standing which enables them to take a degree in two years, appointments are made for two years in the first instance. Scholars may, however, hold the Scholarship for only 1 year. Those Scholars who elect to read for a DPhil at the time of admission may apply for a third year on stipend. The Rhodes Scholar must present a definite plan of study for that period satisfactory to his/her College

and to the Rhodes Trustees. A Rhodes Scholar may apply to any one of the courses of study available at the University of Oxford, subject to the consent of the college or, in the case of graduate study, the relevant faculty or department.

The stipend of a Rhodes Scholarship consists of a direct payment to the University and to the Scholar's College of approved fees (such as matriculation, tuition, laboratory fees, and certain other set charges), plus a maintenance allowance, which is paid directly to the Scholar at the rate of at least \$3,480 per annum to cover board, lodging and other expenses. The sum provided should be sufficient to enable a Scholar to meet the necessary expenses for term-time and vacations, but those who can afford to supplement it to a modest extent from their own resources are advised to do so. Reasonable travel expenses to and from Oxford will be paid by the Trust. Application forms containing full particulars can be obtained from the Secretary of the Selection Committee for the Province of Newfoundland or from the Scholarships and Awards Office at Memorial University of Newfoundland. Inquiries may be directed to the Secretary of the Selection Committee in writing to Dr. S. Ann Colbourne, 88 Hugh's Pond Road, Portugal Cove-St. Philips, NL, A1M 2C6, or by telephone to (709) 777-5219, or by fax to (709) 777-5849, or by email to acolbourne@nl.rogers.com

#### **ROBIN HOOD MULTIFOODS SCHOLARSHIP**

One scholarship, valued at \$1000.00 for a two-year period, is made available by Robin Hood Multifoods to a student entering first-year university. For students entering Memorial University of Newfoundland, priority will be given to those enrolled in a Nutrition or Biology program. The award will be made on the basis of a candidate's participation in youth activities and priority is given to 4-H members, providing that the candidate meets the necessary academic and financial need requirements. Information and applications are available in writing to The Co-ordinator, Youth Services Division, Confederation Building, St. John's, NL, H3C 1E3.

#### **THE G. ALLAN ROEHER INSTITUTE AWARDS**

The G. Allan Roeher Institute offers bursaries to graduate students and research grants (up to \$8000 each) to post-graduate students and faculty members or associates, who are interested in the field of mental handicap or related fields. These awards are made possible through the support of the Scottish Rite Charitable Foundation of Canada. Further information and application forms may be obtained in writing to The Secretary, Bursaries and Grants Adjudicating Committee, G. Allan Roeher Institute, Kinsmen Building, York University, 4700 Keele Street, Downsview, Ontario M3J 1P3.

#### **ROYAL CANADIAN LEGION SCHOLARSHIPS**

##### **a. Provincial Command Scholarships**

Two scholarships, valued at \$750.00 each, are awarded annually to students entering University for the first time who are children of ex-service personnel, or of Life, Ordinary or Associate Voting Members of the Legion. Actual financial need is taken into account in addition to scholastic standing when awards are made.

##### **b. Dominion Command Scholarships**

Two scholarships, valued at \$750.00 each, are awarded annually to students in their second, third, or fourth-year of university, who are the children of ex-service personnel, or of Life, Ordinary or Associate Voting members of the Legion. Actual financial need is taken into account in addition to scholastic standing when awards are made. Application forms available in writing to The Newfoundland & Labrador Command, The Royal Canadian Legion, P.O. Box 5745, St. John's, NL, A1C 5X3.

#### **THE ROBERT B. SALTER SCHOLARSHIP IN MEDICINE**

This scholarship is awarded annually from income derived from an endowment by Dr. Robert B. Salter, Professor and Head of Orthopedic Surgery at the University of Toronto, who has had a long association with the Grenfell Mission. This scholarship is to be awarded to the third-year undergraduate medical student who best exemplifies the qualities of compassionate and competent patient care. Preference will be given to students born in Newfoundland and Labrador. The award is made by the Dean of Medicine's Advisory Committee on Awards, Bursaries and Scholarships.

#### **DIANA LEMIRE SAVIDANT MEMORIAL BURSARY**

Diana Lemire Savidant (1943-1994) was born and raised in Rouyn, Quebec and moved to Prince Edward Island in 1973. Always an avid student, she also gained respect as an art teacher. Applications for the scholarship will be accepted from female residents of Prince County 18 years of age and older. The award will be given to the applicant who displays the most potential for development and that sense of exploration in the visual arts epitomized by Diana Lemire Savidant's own career. Financial need will be an important factor in determining the recipient but not necessarily the only one. Applicants are expected to be pursuing the arts as a career option or serious avocation. Eligible programs include: study in the visual arts at recognized post-secondary institutions; summer schools or professional level courses and advanced workshops and seminars, minimum duration of five days.

The bursary will be awarded in June of each year commencing in 1996 and the amount of the bursary will be determined each year based on the return on the capital fund invested. The award will be presented in the form of a cheque or bank draft payable jointly to the successful applicant and the educational institution. The Awards Committee may vary this rule if it is not applicable. No award will be made with respect to expenses already incurred. Should the program applied for be cancelled or the recipient withdraw or fail to enroll, the funds must be returned to the East Prince Women's Information Centre.

Applicants will be invited in March of each year through public announcements and other means with an application deadline of May 15. All applications must be accompanied by a resume and a full description of the program being pursued. The applicant should include a one page summary of personal background in art achievement and what goals are being pursued by following the study program for which support is being requested. Applicants selected for a finalist interview must be prepared to display a small portfolio of work, preferably in more than one medium. Where the program is more than one year in duration applicants are eligible to re-apply. Applications will be received until May 15 and may be obtained in writing to East Prince Women's Information Centre, 75 Central Street, Summerside, PE C1N 3L2 or by telephone to (902) 436-9856.

#### **THE SOCIETY OF UNITED FISHERMEN MEMORIAL SCHOLARSHIPS**

There shall be awarded annually by this Society two scholarships of a combined value of \$600.00. These scholarships are awarded to children of members or deceased members of the Society. The scholarships are tenable at Memorial University of Newfoundland or any other institution of learning at which the student might wish to continue his or her studies in the year following graduation from high school. Further information and application forms may be obtained in writing to The Grand Secretary, Society of United Fishermen, P.O. Box 1434, St. John's, NL. The deadline date for application is July 1st.

#### **THE ST. JOHN AMBULANCE BURSARY**

This bursary of \$1,000.00 is awarded to a student who is eligible for admission to a Bachelor's Program at a recognized University or Community College. Post-basic nurse applicants are required to be members of their Provincial/Territorial Nurses' Association and hold current registration or a Certificate of Competence.

All applicants must have a St. John Ambulance Affiliation and must demonstrate financial need. The application deadline is March 15.

Further information and applications forms is available in writing from St. John Ambulance Provincial Council or in writing to St. John Ambulance National Headquarters, 312 Laurier Ave. E., Ottawa, Ontario K1N 6P6 or by contacting Jean Wills, Deputy Director of Training Health Care by telephone to (613) 236-7461 or by fax to (613) 236-2425.

**THE SURGERY PRIZE IN ANATOMY**

This prize, valued at \$500.00, is awarded annually to a first-year student who has demonstrated a high proficiency in Anatomy, particularly in the practical field. Nomination of a candidate is made by the Professors of Anatomy and the Professor & Chairman of Surgery. The award is made by the Dean of Medicine's Advisory Committee on Scholarships, Awards and Bursaries.

**THE PATRICK TASKER MASONIC EDUCATIONAL FUND**

This fund was established to provide financial assistance for the education of children of deceased, incapacitated and/or needy Masons who were or are members of participating Masonic Lodges in Newfoundland. The fund provides a limited number of scholarships (up to a value of \$800.00), payment of tuition fees for first-year students, and interest-free loans. In addition to the above, four entrance scholarships of \$500.00 each are available to the dependants of any eligible member of the Masonic Fraternity within the province of Newfoundland and Labrador. These scholarships are awarded on the basis of academic achievement in Grade XII and are tenable at Memorial University of Newfoundland or at any other approved post-secondary institution in the province. Further information and applications forms is available in writing from The Patrick Tasker Masonic, Education Fund, P.O. Box 5481, St. John's, NL, A1C 5W4, ATTN: The Secretary.

**WATERFORD HOSPITAL BOARD OF MANAGEMENT SCHOLARSHIPS**

The Waterford Hospital Board of Management annually awards two scholarships, valued at \$500.00 each and tenable at Memorial University of Newfoundland, to children of employees of the Hospital. The awards are made on the recommendation of a Selection Committee especially appointed by the Board for that purpose. One of the scholarships is to be awarded to a female and the other to a male. Generally they are to be awarded to students who are entering the University for the first time. In the absence of suitable entrance applicants, the scholarships may be re-awarded or awarded to other children of employees who are beyond first year. In selecting suitable applicants academic standing as well as financial need will be taken into account. Applications for the scholarships may be obtained from the Administrator of the Hospital and must be completed and returned to that office by May 1st of any year.

**THE WESTERN MEMORIAL REGIONAL HOSPITAL SCHOLARSHIP**

This scholarship of \$500 is derived from interest on funds invested by the Medical Staff of the Western Memorial Regional Hospital and is awarded annually to a student who is entering the third year of medical studies at Memorial University of Newfoundland. The recipient shall be a bona fide resident of that area served by the Western Memorial Regional Hospital and shall have high academic standing. The scholarship is awarded by the Medical Staff of Western Memorial Regional Hospital in consultation with the Dean of Medicine. Applications should be made in July of each year to: The Chief of Staff, Western Memorial Regional Hospital, P.O. Box 2005, Corner Brook, NL, A2H 6J7.

**THE MARGARET WILLIAMS TRUST FUND**

This fund was established to promote the development of librarianship in Newfoundland and Labrador by providing funds for scholarships, research, special projects and work exchange opportunities. The value of awards will depend upon the annual interest earned on the fund. Further information and applications forms is available in writing from Chairman, Board of Trustees, Margaret Williams Trust Fund, Queen Elizabeth II Library, Memorial University of Newfoundland, St. John's, NL, A1B 3Y1.

**WORK TERM SCHOLARSHIPS & AWARDS IN ENGINEERING**

**W.W. COSSITT** - This award is intended for the Senior Engineering Student (Work Term 4, 5, & 6) who has made the most important contribution to an employer and therefore to the Co-operative Engineering Program. The award is made available by the Association of Professional Engineers and Geoscientists of Newfoundland (APEGN) once per semester and has a monetary value of \$200. APEGN provides final choice of the winner, based upon review of the reports of a select number of students recommended by the Division of Co-operative Education. The Division's recommendation is based upon: A) Student work performance; B) Student work report; C) Student academic standing; D) Supervisor nomination. The prize is awarded by the Scholarship and Awards Committee of APEGN.

**CANADIAN CONSTRUCTION RESEARCH BOARD** - (\$200 PER SEMESTER) To a senior Engineering Work Term (Work Terms 4, 5 & 6. Student for a report which deals with the research aspects of the construction industry. The Division of Co-operative Education will submit nominations to the Canadian Construction Research Board for final selection of a winner.

**ENES - EASTERN NEWFOUNDLAND ENGINEERING SOCIETY** - This award is intended for the Junior Engineering Student (Work Term 1, 2, & 3) who has made the most important contribution to an employer and therefore to the Co-operative Engineering Program. The Award is made available by the Eastern Newfoundland Engineering Society (ENES) once per semester and has a monetary value of \$200. ENES provides final choice of the winner, based upon review of the reports of a select number of students recommended by the Division of Co-operative Education. The Division's recommendation is based upon: A) Student work performance; B) Student work report; C) Student academic standing; D) Supervisor nomination. The prize is awarded by the Scholarship and Awards Committee of ENES.

## 9 Loan Funds

**MAUDE ABBOTT MEMORIAL SCHOLARSHIP LOAN FUND**

This fund was established by the Federation of Medical Women of Canada. Small loans are available to any woman medical student or first-year intern. In special cases a loan of up to \$1000.00 may be granted to a medical woman for recognized post-graduate training. Loans are repayable within five years of date of issue, after which time interest will be charged at the rate of 5% compounded annually. Information regarding these loans may be obtained in writing to Secretariat, Federation of Medical Women of Canada, P.O. Box 8244, Ottawa, Ontario K1G 3H7.

**THE ASSOCIATION OF PROFESSIONAL ENGINEERS OF NEWFOUNDLAND LOAN FUND**

Established by the Association of Professional Engineers of Newfoundland for Engineering students during their time at this University. Apply to the Dean of Engineering and Applied Science, Memorial University of Newfoundland.

**THE BREEZEWAY EMERGENCY TRUST FUND**

In May, 1984, the Board of Directors of the Breezeway Bar gave to the University a sum of money, to be used as an emergency loan/bursary fund for needy undergraduate students. The Fund is administered by the Director, Student Support Programs through the Manager, Scholarships and Awards, and within guidelines already developed by the office for awards to financially needy students. These awards will not normally exceed \$300.00.

**CANADA STUDENT LOANS PROGRAM NEWFOUNDLAND AND LABRADOR STUDENT LOANS PROGRAM**

The Canada and Newfoundland and Labrador Student Loans Programs have been instituted by the Federal and Provincial Governments to provide assistance for students at universities and other institutions of post-secondary education.

The authorizing agency for Newfoundland and Labrador may be contacted in writing to Student Financial Services Division, Department of Youth Services and Post-Secondary Education, P.O. Box 8700, St. John's, NL, A1B 4J6 or by telephone to (709) 729-5849 or by fax to (709) 729-2298 or by e-mail to studentaid@mail.gov.nf.ca or website: www.edu.gov.nf.ca/studentaid.

The procedure is as follows:

- a. Students seeking financial assistance must apply on an official application form for the academic year in which they are requesting

assistance. Students may choose to apply on a paper application or via the Internet. It is the students' responsibility to ensure all required documentation has been submitted to our office.

- b. If applications are successful, each student will be given certificates of eligibility for their federal and provincial student loans. In general, to receive a federal student loan, applicants must be enrolled in at least 60% of a full course load. In order to receive a provincial student loan, applicants must be enrolled in at least 80% of a full-course load.
- c. Having received the certificates of eligibility, students may then approach a designated postal outlet to negotiate the Canada Student Loan and the provincial authorized agency/lender to negotiate the Newfoundland and Labrador Student Loan.
- d. A Canada Student Loan up to a maximum of \$165 per week of study may be granted. A Newfoundland and Labrador Student Loan up to a maximum of \$110 per week of study may be granted (up to \$200 per week provincial student loan for Memorial University of Newfoundland Medical Students).
- e. As long as students maintain full-time studies the interest on the loan will be paid by the government. Repayment will begin 6 months after a student ceases full-time studies.

#### **CANADIAN FORCES PERSONNEL ASSISTANCE FUND EDUCATION ASSISTANCE LOAN Program**

The Canadian Forces Personnel Assistance Fund offers an Education Assistance Loan Program to assist serving and former members and their dependents with costs of post secondary education.

To be eligible for a low interest loan of \$1,200, \$1,500, then in \$500 increments up to a maximum of \$4,000 per student, per year, the serving or former member must have served in the Canadian Army, after 1st October 1946, or in the Canadian Forces, after 31 January 1968, and have a minimum of one year Regular Force military service. The loans are repayable over 12 to 48 months.

Application forms are available on our website at [sisip.com/en/Downloads\\_e/ealp\\_e.asp](http://sisip.com/en/Downloads_e/ealp_e.asp) or from the Canadian Forces Base Financial Counsellors, district offices of Veterans Affairs Canada, and the Provincial Command offices of the Royal Canadian Legion, or by writing to CFPAPF, 234 Laurier Avenue West, Ottawa, Ontario, K1P 6K6, telephone: (613) 760-3447, or toll free: 1-888-753-9828. For those who wish to obtain their loan in time for the semester beginning September, your submission should arrive at CFPAPF by June 30. Otherwise, applications will be accepted throughout the year until the funds allotted for the EALP are exhausted.

#### **THE GERALD S. DOYLE ENGINEERING SCHOLARSHIP LOAN FUND**

By the generosity of the late G.S. Doyle, Esq., O.B.E., there are a number of scholarship loans available each year to Engineering students. The loans are normally in the amount of \$500.00 per year, but may, when circumstances warrant, extend up to \$1,000.00 per year. The loans are made by the Dean of Students Affairs and Services on the recommendation of the Dean of Engineering and Applied Science. These loans may be granted for three successive years and are repayable at convenient times before graduation. Applications are available from the Office of the Associate Dean of Engineering and Applied Science.

#### **HELEN M. LODGE LOAN FUND**

The bequest of the late Professor Helen M. Lodge, formerly Professor of Education at this University.

#### **F.W. ROWE STUDENT LOAN FUND**

Based on royalties from Dr. Rowe's book, *The Development of Education in Newfoundland*. At the author's suggestion, priority is to be given to the children of active, retired or deceased teachers.

## **10 Scholarships and Awards Available to Graduate Students**

### **10.1 Awards Administered By the School of Graduate Studies**

Information on all graduate awards listed below can be obtained from the Dean of Graduate Studies.

#### **F.A. ALDRICH GRADUATE AWARD**

The F.A. Aldrich Graduate Award has been established in memory of the first Dean of Graduate Studies at Memorial University of Newfoundland. Up to three annual awards of \$2,000.00 may be made. Awards will be made by the Dean of Graduate Studies to alumni of Memorial University of Newfoundland who are in the first year of a full-time graduate program and will be based on academic merit, and need only if all other things are equal. If the application is based on need, please make a case.

#### **THE ATREYA-HARITHA SCHOLARSHIP IN MATHEMATICS**

This scholarship is the result of a generous donation by Dr. K.R. and Nandinin Kothandaraman. Valued at \$1000 annually, it will be awarded on the basis of scholarship standing to a full-time student, either a senior level undergraduate or a graduate student in Mathematics and/or Statistics. In the case of an undergraduate student, the scholarship will be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid upon recommendation of the Head, Department of Mathematics and Statistics. In the case of a graduate student, it will be awarded by the Dean, School of Graduate Studies, also upon recommendation of the head, Department of Mathematics and Statistics.

#### **THE WILLIAM H. AND BERTHA BAIRD MEMORIAL SCHOLARSHIP**

This scholarship, valued at the annual interest on the endowment, has been established by Mrs. Edna Baird-Stephenson in memory of her parents. It will be awarded to a full time graduate student at either the Master's or doctoral level. Eligible candidates should be residents of the province, or should have been resident in the province for at least three years prior to entering the program, excluding time spent at post secondary institutions. The award, based on academic excellence, will be made by the Dean, School of Graduate Studies on the recommendation of the Awards and Medals Committee.

#### **THE BARROWMAN BIOCHEMISTRY GRADUATE TRAVEL AWARDS**

The income from this endowment will be used to provide a number of awards to graduate students registered in the Department of Biochemistry, so that they may attend scientific conferences. Preference will be given to full-time students but part-time students will also be considered. It is anticipated that about three awards will be made each year. The awards will be made by the Dean of Graduate Studies upon the recommendation of the Head, Department of Biochemistry.

#### **THE BARROWMAN COMMUNITY HEALTH GRADUATE TRAVEL AWARDS**

The income from this endowment will be used to provide a number of awards to full-time graduate students pursuing a research program in the Division of Community Health, so that they may attend scientific conferences. The awards will be made by the Dean of Graduate Studies on the recommendation of the Assistant Dean, Research and Graduate Studies, Faculty of Medicine.

#### **THE DAVID BUCHAN GRADUATE RESEARCH AWARD IN FOLKLORE**

The Research Award is established in memory of Dr. David Buchan, a leading international ballad scholar, faculty member in the Department of Folklore from 1979 to 1994, and the first Memorial University of Newfoundland Research Professor. Administered by the School of Graduate Studies, two awards of \$500 will normally be given each year to fund costs related to national/international travel for the accomplishment of, or the presentation of, folklore research by students in the graduate program in folklore at Memorial University of

Newfoundland. The awards, given on the basis of scholarly merit combined with the quality of a research proposal or conference paper abstract, will be made by the Dean of the School of Graduate Studies upon recommendation from the Head of the Department of Folklore, who will be advised by the Department of Folklore's Scholarships and Awards Committee.

#### **BUCHANS SCHOLARSHIP FUND OF ASARCO INCORPORATED**

ASARCO Incorporated has established a scholarship fund, the annual interest on which will provide for students enrolled in the Department of Earth Sciences, Memorial University of Newfoundland, either a scholarship for post-graduate study and research, valued at \$5000.00; or two scholarships for undergraduate study, valued at \$500.00 each. The latter scholarships will be available only when no suitable candidate can be found for the former. In order to qualify for these awards, students must be native-born Newfoundlanders or graduates of Newfoundland high schools. In the case of the graduate scholarship, the award will be made by the Dean of Graduate Studies on the recommendation of the Head, Department of Earth Sciences; in the case of the undergraduate scholarships, by the Senate Committee on Scholarships and Financial Aid on the recommendation of the Head, Department of Earth Sciences. Should no candidates be available in any year, the awards may be held over.

#### **THE MAURICE J. BURKE MEMORIAL SCHOLARSHIP**

This scholarship, valued at approximately \$1,000.00 annually, was established by the family of the late Maurice Burke. Mr. Burke served in the Provincial Department of Education in the Teacher Certification Division for thirty-five years. He was also a columnist and author with a personal and professional interest in Newfoundland culture and folklore celebrating the uniqueness of Newfoundland outport life. It will be awarded alternately to a full-time graduate or undergraduate student in the Department of Folklore on the basis of scholarship standing. In the case of undergraduates it will be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid. In the case of graduates it will be awarded by the Dean, School of Graduate Studies. In both cases the scholarship will be awarded on the basis of a recommendation from the Head, Department of Folklore.

#### **FACULTY OF BUSINESS ADMINISTRATION ASSOCIATES SCHOLARSHIP FUND**

This fund was established through the contributions of members of the Associates' Program of the Faculty of Business Administration. The fund will provide scholarships for undergraduate and graduate students in the Faculty. Awards will be made on the basis of academic standing but such factors as financial need and contribution to the Faculty may be taken into account.

In the case of the undergraduate program, scholarships will be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid on the recommendation of the Dean, Faculty of Business Administration.

In the case of the graduate program, the scholarships will be awarded by the Dean of Graduate Studies on the recommendation of the Dean of Business Administration.

#### **THE GREG CAMPBELL MEMORIAL BUSINESS SCHOLARSHIP**

This scholarship is the result of a generous donation by Eleanor Swanson in memory of her late husband, J. Gregory Campbell. Interest on the fund will provide one award to a full-time graduate student in the Faculty of Business Administration who is entering the final year of study. Candidates for this scholarship must have scholarship standing and a demonstrated record of active community involvement, volunteer work and/or service in the faculty/University. The scholarship will be awarded by the Senate Committee on Graduate Scholarships and Financial Aid upon the recommendation of the Dean, School of Graduate Studies.

#### **CANADIAN COLLEGE OF TEACHERS SCHOLARSHIP**

This scholarship, valued at \$1,000.00, is sponsored by the Cabot Chapter of the Canadian College of Teachers and is awarded annually to a full-time graduate student in the Faculty of Education for outstanding research. The award is made on the basis of application by a student or nomination by the student's supervisor. The application or nomination may take the form of a thesis or project proposal, but preferably be supported by an explanation of why the work involved is particularly meritorious. Applications should be forwarded to the office of the Associate Dean of Graduate Programs and Research, Faculty of Education. The scholarship will be awarded by the Dean, School of Graduate Studies, upon recommendation of the Dean, Faculty of Education.

#### **THE ROB CROSBIE SCHOLARSHIP FOR INTERNATIONAL STUDY**

This fund was established from contributions to the University's *Opportunity Fund* Campaign by Mr. Rob Crosbie. The scholarship, valued at \$1,000.00 annually, will support a Business student (graduate or undergraduate) who is on an academic international exchange and who has shown interest in pursuing a career in the oil and gas industry. In the case of undergraduate students, the scholarship will be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid upon the recommendation of the Dean, Faculty of Business Administration. In the case of graduate students, it will be awarded by the Dean, School of Graduate Studies upon recommendation of the Faculty Committee on Graduate Studies.

#### **THE SALLY DAVIS SCHOLARSHIP**

The Sally Davis Scholarship has been established to celebrate the memory and life work of Sally Davis. Contributions to the scholarship fund have come from family and friends who were so lovingly and generously influenced by Sally during her long life. The scholarship, valued at \$1000.00, will be awarded annually in the Spring Semester. Eligible candidates must be full-time students in the Master of Women's Studies program. Preference will be given to a candidate studying in one of the following areas: peace and international understanding, literacy, children, labour movement, gun control, or environment. If there is no qualified graduate applicant in a particular year, the award may be offered to an undergraduate (who is registered in a minor in Women's Studies) who is in financial need. An individual may receive the award twice but no more. In the case of graduates it is awarded by the Dean of Graduate Studies upon recommendation of the Co-ordinator, Women's Studies Program. In the case of undergraduates, the scholarship is awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid upon the recommendation of the Co-ordinator, Women's Studies Program.

#### **EATON FOUNDATION SCHOLARSHIP**

This scholarship, valued at \$1,500.00, is to be awarded to a student who has left full-time employment of five years or more to enter full-time studies in the MBA program, for completion or near completion of the degree. Selection of the candidate for the scholarship will be made on the basis of academic merit and financial need. Awards will be made on the recommendation of the Dean, Faculty of Business Administration, and the Dean of Graduate Studies. Preference will be given to Canadian citizens and landed immigrants.

#### **THE ECHOS DU MONDE CLASSIQUE/CLASSICAL VIEWS INTERNSHIP FUND**

This fund jointly sponsored by the journal *Echos du Monde Classique/Classical Views* and the School of Graduate Studies, was established to support a full-time graduate student in Classics to train as an editorial intern with *EMC/CV*. It is awarded on the basis of academic standing to a full-time graduate student entering the Department of Classics and is valued at \$10,000.00 per annum, paid over a period of three successive academic semesters. It may be renewed for one additional year. The internship will be awarded by the Dean of Graduate Studies on the recommendation of the editors of *Echos du Monde Classique/Classical Views*.

#### **THE FACULTY OF BUSINESS ADMINISTRATION JACINTA SHEPPARD FELLOWSHIP**

This fellowship, made possible through a donation by the Faculty of Business Administration, is in honour of Jacinta Sheppard, an MBA student who passed away in 1997 after a lengthy illness. While in the MBA program, Ms. Sheppard demonstrated academic excellence and a dedication to learning. This fellowship has a value of \$1,000.00 annually, and will recognize a full-time student who, in the opinion of a Selection Committee, Faculty of Business Administration, has demonstrated these same qualities. The award will be made by the

Dean of Graduate Studies on the recommendation of the Dean, Faculty of Business Administration.

#### **THE DR. ALEX FASERUK MBA SCHOLARSHIP FOR EXCELLENCE IN SERVICE**

The Dr. Alex Faseruk MBA Scholarship for Excellence in Service will be awarded annually to a full-time MBA student of scholarship standing who has demonstrated outstanding service through participation in student, faculty or university activities and/or contribution to the larger community. This award is in recognition of Dr. Faseruk's contribution to the Faculty of Business Administration as Professor of Finance and Coach of MBA case competition teams. The value of this scholarship will be determined by the annual income derived from the endowment. It will be awarded by the Dean of Graduate Studies upon the recommendation of the Associate Dean, Academic Programs, Faculty of Business Administration.

#### **THE J. BRUCE AND HELEN H. FRENCH GRADUATE SCHOLARSHIP IN PHYSICS**

This scholarship valued at the annual accrued interest on an initial endowment, will be awarded to a female student at any level of a graduate program in physics on the basis of excellence in both course work and research. If, in a particular year, a qualified female student is not available, the scholarship may be awarded to a male student who meets the other conditions. The scholarship will be awarded by the Dean of Graduate Studies upon the recommendation of the Head, Department of Physics.

#### **THE FRY FAMILY FOUNDATION GRADUATE LEADERSHIP SCHOLARSHIP**

The Fry Family Foundation scholarship will be awarded to a resident of Newfoundland and Labrador to support full-time graduate study in a master's program or a doctoral program at Memorial University of Newfoundland. The scholarship, which is valued at \$25,000.00, will be paid over the normal funding eligibility period appropriate to the recipient's program. It is intended to recognize a resident of Newfoundland and Labrador who has displayed exceptional leadership skills, has demonstrated academic merit, and who intends to pursue a graduate program related to study of leadership in areas such as international affairs, business, engineering and technology, science, politics, the media etc. The recipient's program of study should demonstrate a strong commitment to Newfoundland and Labrador. As part of the scholarship, the student will commit to completing the full-time master's or doctoral program which will include a study abroad component and/or an international internship placement or other international program option focusing on leadership, as approved by the Dean of the appropriate faculty or school. The scholarship will be awarded by the Dean, School of Graduate Studies, on the recommendation of a special selection committee, which will include a member of the Fry Family Foundation and various university personnel. The recipient of this scholarship must meet the normal admission requirements to Graduate Studies at Memorial University of Newfoundland.

#### **THE P.J. GARDINER AWARD FOR SMALL BUSINESS AND ENTREPRENEURSHIP**

This fund was established from contributions to the University's Anniversary Fund to commemorate the memory of the late Peter Gardiner, a former Director of Memorial University of Newfoundland's School of Business and local entrepreneur. Interest from the fund provides an annual award of \$5,000.00 to recognize student creativity, innovation and entrepreneurship as evidenced by the establishment or plan to establish a new venture. Students at all levels of their business program (graduate or undergraduate) are eligible for the award. In order to be considered for an award, applicants must submit a Venture Plan in the case of a proposed venture or a detailed description of a venture that they have already established. The submissions will be reviewed by a panel consisting of representatives from Industry and from the Faculty. In the case of undergraduate students, the awards will be made by the Senate Committee on Undergraduate Scholarships and Financial Aid acting on the recommendation of this panel. In the case of graduate students, the awards will be made by the Dean of Graduate Studies acting on the recommendation of the panel and the Faculty Committee on Graduate Studies.

#### **THE PETER GARDINER AWARD FOR INTERNATIONAL STUDY**

This fund was established from contributions to the University's Anniversary Fund to commemorate the memory of the late Peter Gardiner, a former Director of Memorial's School of Business. Interest from the fund will provide or two annual awards of \$2,500.00 each to support Business students (graduate and/or undergraduate) to study at Memorial University of Newfoundland's Harlow Campus or at another university outside Canada. In the case of undergraduate students, the awards will be made by the Senate Committee on Undergraduate Scholarships and Financial Aid upon the recommendation of the Dean, Faculty of Business Administration. In the case of graduate students, the awards will be made by the Dean of Graduate Studies upon recommendation of the Faculty Committee on Graduate Studies.

#### **THE GRADUATE TEACHING TRAVEL AWARD**

This award assists students with travel to attend conferences, workshops and other meetings that have as their principal concern teaching at the post-secondary level. Preference will be given to full-time graduate students who have completed or are currently enrolled in Memorial University of Newfoundland's Graduate Program in Teaching. Ideally the winner will present a paper or contribute in some other significant way to the event. The award will be made by the Dean of Graduate Studies on the recommendation of the Coordinator(s) of the Graduate Program in Teaching. It will be valued at the annual accrued interest on the initial investment.

#### **THE MARY A. GRIFFITHS MEMORIAL BURSARY FUND FOR FOLKLORE FIELD RESEARCH (GRADUATE)**

This fund has been established by the Memorial University of Newfoundland Folklore Society in memory of Mary A. Griffiths, B.A. (Folklore). One of more bursaries valued at a minimum of \$250.00 each will be awarded annually to graduate Folklore students who wish to pursue field research. The awards will be made by the Dean of Graduate Studies on the recommendation of the Head of the Department of Folklore. Selection will be made on the basis of a submitted research proposal as well as demonstrated financial need. Application forms and guidelines are available from and should be submitted to the Folklore Department. Deadline date for submission of applications is January 31. If there are no suitable candidates in a given year the bursaries will not be awarded.

#### **THE MICHAEL HARRINGTON RESEARCH PRIZE IN NEWFOUNDLAND HISTORY**

This award was established by the family of Michael Francis Harrington Sr., journalist, author and Newfoundland historian. The prize is valued at a minimum of \$500.00 and will be awarded annually to an undergraduate or graduate student doing research in Newfoundland history. To be considered, undergraduate students must be history majors planning to do research for a course in Newfoundland history or towards an honours thesis. Graduate students must be writing a thesis on some aspect of Newfoundland history. In some instances it may be awarded as a travel grant which will assist students with travel expenses incurred while undertaking their research. In the case of undergraduates it will be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid upon recommendation of the Head, Department of History. In the case of graduates it will be awarded by the Dean, School of Graduate Studies, also upon recommendation of the Head, Department of History.

#### **THE DR. AUSTIN J. HARTE MEMORIAL SCHOLARSHIP**

The Dr. Austin J. Harte Memorial Scholarship commemorates the memory of Austin Harte who was a member of the Faculty of Education, Memorial University of Newfoundland from 1991-1995. The scholarship, which is valued at one thousand dollars (\$1,000.00), may be awarded annually to a student in a graduate program, in the Faculty of Education. In order to be eligible for consideration, candidates must be registered full time and satisfy all other conditions as stipulated by the University. The Scholarship will be awarded by the Dean, School of Graduate Studies upon the recommendation from the Dean, Faculty of Education. A special application is required and may be obtained from the Faculty of Education and/or the School of Graduate Studies. Deadline for Application: March 15.

#### **A.G. HATCHER MEMORIAL SCHOLARSHIP**

Normally, up to three A. G. Hatcher Memorial Scholarships are awarded annually commencing in the Fall Semester. The awards are to

be made solely on the basis of high academic merit. Typically a minimum of a first class degree is required. One scholarship shall be awarded to an applicant who graduated with an undergraduate degree from Memorial University of Newfoundland, one to an applicant who graduated with an undergraduate degree from a Canadian university, and, one to an applicant who graduated with an undergraduate degree from a foreign university. The value of the scholarship is \$15,000, and it may be held for one year only. Recipients holding a major external award of \$15,000 or greater will retain \$3,000 of the A. G. Hatcher Memorial Scholarship. One nomination from each category listed above, for these awards, should be forwarded to the Dean or Director by June 1st. Deadline for the Dean or Director to submit nominations to the School of Graduate Studies is June 15th.

#### **THE ROLF G. HATTENHAUER SCHOLARSHIP FUND**

This fund was established by the Labour Management Co-operation Committee to commemorate the late Professor Rolf G. Hattenhauer, a well-known Newfoundland arbitrator who was actively involved in setting up the Committee. Professor Hattenhauer was a member of the Department of Commerce (later the Faculty of Business Administration) at Memorial University of Newfoundland from 1965 until his death in 1983, and during the year 1969-70 served as Head (pro tem) of the Department. The fund will provide scholarships and fellowships on a rotating basis in undergraduate and graduate studies in Business Administration.

In the case of the undergraduate scholarships, preference will be given to students in Terms 6 and 7 of the Bachelor of Commerce program who are majoring in Labour Relations. These scholarships will be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid on the recommendation of the Dean of Business Administration.

In the case of the graduate fellowships, preference will be given to those students in the Master of Business Administration program who are concentrating in or conducting research on the area of personnel and industrial relations. The graduate fellowships will be awarded by the Dean of Graduate Studies on the recommendation of the Dean of Business Administration. If a suitable graduate student is not available in a given year the scholarship for that year may be awarded to an undergraduate student.

#### **THE IMPERIAL TOBACCO CANADA LIMITED GRADUATE SCHOLARSHIP IN BUSINESS STUDIES**

This scholarship valued at the annual accrued interest on an initial endowment was established from a generous donation made by Imperial Tobacco Canada Limited. Two awards, valued at \$3,000.00 each, will be made annually to entering full-time graduate students whose area of specialization is business studies. The scholarship may include, at the discretion of the donor, an invitation to their head office to meet their management team. The award may be renewed for a second year provided that academic standing is maintained. Selection of the candidates will be made on the basis of academic merit. The award will be made by the Dean, School of Graduate Studies, on the recommendation of the Awards and Medals Committee.

#### **THE DR. ETHEL M. JANES MEMORIAL SCHOLARSHIP IN EDUCATION (GRADUATE)**

From a sum of money endowed to Memorial University of Newfoundland by the late Dr. Ethel M. Janes, one scholarship valued at \$2,000.00 will be awarded annually on the basis of scholastic achievement. Dr. Janes, a Professor of Education at Memorial University of Newfoundland for twenty-eight years, devoted most of her professional career to study, research and teaching in primary and elementary education. Her contribution to the development of primary and elementary teacher education programs within the faculty was significant, as was her influence on primary and elementary education in the schools. Two generations of prospective teachers were her students.

This scholarship will be awarded on the basis of academic standing in a first Memorial University of Newfoundland Education degree to a graduate student with a specialization in reading or language arts. In the event that in any given year no graduate student qualifies for the award, this scholarship will be awarded to an undergraduate student. Instalments of \$1,000.00 each will be awarded in two successive academic terms; and the scholarship is renewable for two years, provided first-class standing is maintained. This award will be made by the Dean of Graduate Studies upon the recommendation from the Dean, Faculty of Education.

#### **THE LGL LIMITED SCHOLARSHIP IN MARINE SCIENCE**

This scholarship, valued at \$1,000.00, was established by LGL Limited. It will be awarded annually to a student in the Faculty of Science who is following a program of studies related to Marine Science. The successful candidate will be either a fourth year undergraduate student doing an honours program or a graduate student. Wherever possible, preference will be given to a student from a fishing family, but other students will be considered. In the case of undergraduate students the scholarship will be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid on the basis of scholarship standing. In the case of graduate students the scholarship will be awarded by the Dean, School of Graduate Studies. In both cases it will be based upon a recommendation from the Dean, Faculty of Science.

#### **THE MARITIME AWARDS SOCIETY OF CANADA (MASC) MARITIME STUDIES SCHOLARSHIP**

The Maritime Awards Society of Canada has established an annual scholarship tenable at Memorial University of Newfoundland. The successful candidate will be a Canadian citizen studying in a "maritime based" program at either the Masters or Doctoral level. This scholarship will have a value of at least \$5,000.00 a year and in some cases may be renewed for a second year. It will be awarded by the Dean of Graduate Studies upon the recommendation of the appropriate Academic Unit.

#### **MARITIME HISTORY INTERNSHIP**

This fund, jointly sponsored by the Canadian Nautical Research Society and the School of Graduate Studies, is designated to support a graduate student in history to train as an editorial intern with the journal *The Northerner Mariner/Le Marin du nord*. It will be awarded on the basis of academic standing to a graduate student pursuing studies in the area of maritime history. The award will normally be made to an entering student, but may be made to a student already enrolled in the graduate program. Valued at \$12,000.00 per year, it will be paid over a period of three successive academic semesters and may be renewed. Masters students may be renewed for one additional year and doctoral students may be renewed for up to two additional years. The internship will be awarded by the Dean of Graduate Studies on the recommendation of the editors of *The Northerner Mariner/Le Marin du nord* and the Department of History.

#### **THE EDGAR RAYMOND MARTIN MEMORIAL SCHOLARSHIP IN MUSIC**

This scholarship, valued at the annual interest on the endowment, has been established by Mrs. Helen MacLeod in memory of her brother Edgar Martin. Edgar completed a Bachelor of Science at McGill University, Montreal in 1942 and died later that year while returning to St. John's aboard the S.S. Caribou which was torpedoed, causing the loss of 137 lives. Edgar was 19 years old and had a profound love for classical music. In his memory, this scholarship will be awarded to a full time graduate student in the School of Music. It will be awarded by the Dean, School of Graduate Studies based on a recommendation from the Director, School of Music.

#### **THE MARGARET D. MCLEAN SCHOLARSHIP**

The Margaret D. McLean Scholarship, valued at the annual accrued interest on the initial endowment, is awarded to a graduate of the basic Bachelor of Nursing Program of Memorial University of Newfoundland. The successful candidate must be enrolled in a doctoral program of Nursing (or related field). In the event that an appropriate application from a doctoral candidate is not available, students enrolled in a Master's Program in Nursing (or related field) who intend to obtain a doctorate, may be considered. The scholarship will be based on academic excellence in the Bachelor of Nursing Program and in any graduate courses completed. It will be awarded by the Dean of Graduate Studies upon recommendation of the Director, School of Nursing.

#### **THE GORDON MERTZ MEMORIAL FELLOWSHIP IN PHYSICAL OCEANOGRAPHY**

This fund was established as a memorial for Dr. Gordon Mertz by his family. Dr. Mertz was a Physical Oceanographer at the Northwest

Atlantic Fisheries Centre of the Department of Fisheries and Oceans. Interest from the fund will be used to provide a fellowship which will be awarded annually on the basis of academic excellence to a full-time graduate student working in an area of Physical Oceanography with applications in Fisheries Oceanography or Marine Ecology. The fellowship will be awarded by the Dean of Graduate Studies upon recommendation of the Head, Department of Physics and Physical Oceanography.

#### **THE W.F. MORNEAU SCHOLARSHIP**

This scholarship, valued at the interest on the initial endowment will be awarded by the Dean, School of Graduate Studies upon the recommendation of the Dean, Faculty of Business Administration to a Newfoundland student who has been granted direct entry on a full-time basis to Term 3 of the Master of Business Administration Program and who has exhibited a high level of ambition. Financial need may also be taken into consideration when awarding this scholarship.

#### **THE NEIL MURRAY GRADUATE RESEARCH AWARD IN FOLKLORE**

The Research Award, sponsored by the Newfoundland and Labrador Arts Council, is established to commemorate the energy of Neil Murray in his encouragement and promotion of our provincial folk music traditions.

Open to students currently registered in the graduate program in folklore at Memorial University of Newfoundland, two awards of \$250, or one of \$500, will normally be given each year. These awards are designed to fund costs related to the accomplishment of, or the presentation of, research on the traditional performing arts in Newfoundland, including song, dance, drama, or narrative and/or the cultural traditions of the Newfoundland fishery.

The awards, given on the basis of demonstrated academic merit and a research proposal or conference paper abstract demonstrating original, creative and innovative thought, will be made by the Dean, School of Graduate Studies upon the recommendation of the Head, Department of Folklore, who will be advised by the Selection Committee.

Applications should be directed to the head, Department of Folklore. The deadline for application is March 1st each year.

#### **THE NATIONAL SCHOLARSHIP IN OCEAN STUDIES AT MEMORIAL UNIVERSITY OF NEWFOUNDLAND**

The federal Department of Fisheries and Oceans (DFO) has helped to establish The National Scholarship in Ocean Studies to be awarded to an outstanding Ph.D. candidate in an aspect of ocean studies which may include: chemistry, biochemistry, biology, physics, earth sciences, geography, economics or engineering. The award valued at \$18,000 per annum for a maximum of three successive years may be held in conjunction with other major awards. The award is made only on the basis of academic excellence and the successful candidate must exhibit and maintain first-class standing. Guidelines and applications for the scholarship are available from the School of Graduate Studies. Final selection of the candidate will be made by a committee which reports to the Dean of the School of Graduate Studies. A one-time grant of up to \$2,000 may be made in support of travel to appropriate conferences where the student is presenting research findings. Deadlines for applications will be July 1 in any one year when the scholarship is available, and application should be made on appropriate forms available from the School of Graduate Studies.

#### **THE NEWFOUNDLAND AND LABRADOR NEUROTRAUMA INITIATIVE AWARD**

This award, valued at a portion of the income on the investment, is made possible by a generous endowment from the Newfoundland and Labrador Neurotrauma Initiative Program, a partnership between the Rick Hansen Man in Motion Foundation, the Canadian Paraplegic Association, the Brain Injury Association and the Government of Newfoundland and Labrador. The award will be available on an annually rotating basis between undergraduate and graduate students, with first preference given to a student who has been identified with a brain or spinal cord injury. For undergraduate students applications are available from the Scholarships and Awards Office, Room UC4018, University Centre, (709) 737-3956. Graduate Students are required to apply specifically to the School of Graduate Studies, Room IIC 2021, Inco Innovation Centre, (709) 737-2600. If no candidate is available with a brain or spinal cord injury, preference will be given to a student who is studying in any field related to neurotrauma. If it is not awarded at the level of study (i.e. graduate/undergraduate) on rotation in a given year, it may be awarded to a student studying at the other level for that year. In the case of undergraduates, the award will be made by the Senate Committee on Undergraduate Scholarships and Financial Aid. In the case of graduates it will be awarded by the Dean, School of Graduate Studies on the recommendation of the Awards and Medals Committee. This award is open to part-time or full-time students with clear academic standing.

#### **THE ELIZABETH A. NEWLANDS MEMORIAL SCHOLARSHIP IN SOCIAL WORK**

This scholarship has been named to honour the late Mrs. Elizabeth Newlands, one of the first graduates of the B.S.W. Program at Memorial University of Newfoundland. Valued at a minimum of \$1,000.00 annually, it will be awarded on the basis of academics to either a graduate or undergraduate student enrolled in the School of Social Work. If granted to an undergraduate the scholarship will be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid. If awarded to a Graduate Student, it will be awarded by the Dean, School of Graduate Studies. In either case the scholarship will be awarded on the basis of an appropriate recommendation from the Director, School of Social Work.

#### **THE NOPAH CONSULTING LIMITED BURSARIES IN EARTH SCIENCES**

Two bursaries, valued at \$3,000 each, will be awarded annually to full-time graduate students who are enrolled in a masters program in the area of geology and whose topic of research is directly related to Newfoundland and Labrador. These bursaries will be awarded on the basis of demonstrated financial need and academic standing. They are tenable at Memorial University of Newfoundland and may be renewable for a second year. They will be awarded by the Dean of Graduate Studies, on the recommendation of the Head, Department of Earth Sciences.

#### **THE SENATOR GERALD R. OTTENHEIMER LANGUAGE SCHOLARSHIP**

This scholarship, valued at the annual interest on the initial endowment, has been established via *The Opportunity Fund* in memory of Senator Ottenheimer through the generosity of White Ottenheimer & Baker, Barristers & Solicitors. It will be awarded on a rotating basis to students majoring in one of the language programs or the English Language and Literature programs at Memorial University of Newfoundland (graduate or undergraduate). At the undergraduate level it will be awarded on the basis of scholarship standing to a student in second year or beyond who plans to pursue one of the above noted areas of specialization. In the case of graduate students it will be awarded to a full-time student doing the Masters of Arts in one of the disciplines noted. If the successful candidate is an undergraduate, the scholarship will be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid. If the winner is a graduate student, it will be awarded by the Dean, School of Graduate Studies. In both cases it will be awarded on the basis of a recommendation from the Dean, Faculty of Arts.

#### **THE STUART O. PIERSON PRIZE**

The Stuart Pierson prize, valued at a portion of the annual interest, will be awarded annually on the joint recommendation of the Head of the History department and the Coordinator of the Masters of Philosophy program in Humanities. Eligible students will be enrolled full time, in either the Masters of Philosophy Humanities program, or in the MA or BA Hons. programs in History. Preference will be given to students who show particular promise in the history of ideas, historiography, or the history of science. In the case of undergraduate students, the scholarship is awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid. In the case of graduate students, it will be awarded by the Dean, School of Graduate Studies.

#### **THE DENNIS R. PRINCE MEMORIAL SCHOLARSHIP**

The Dennis R. Prince Memorial Scholarship has been made available by the Prospectors and Developers Association of Canada,



Falconbridge Ltd., the Porcupine Prospectors and Developers Association, the mining community, colleagues, friends and family of the late Dennis Prince. Dennis graduated from Memorial University of Newfoundland in 1970 with a BSc Honours degree. He led a distinguished career as a geologist with twenty-nine years at Falconbridge Ltd.

The annual scholarship, valued at \$2,000.00 and an engraved Brunton compass, will be awarded to a final year student specializing in mineral exploration and development in the honours program of the undergraduate degree in Earth Sciences at Memorial University of Newfoundland. If there is no qualified undergraduate student a graduate student who has been accepted for post-graduate studies in mineral exploration and development at Memorial University of Newfoundland and who intends to pursue a career in the mineral industry, will be considered. The qualifying student must demonstrate scholarship standing, strong personal values including a strong work ethic and high personal integrity. Active participation and leadership in geological associations and activities such as The Alexander

Murray Geology Club and the Geological Association of Canada may be taken into consideration as well as financial need. In the case of undergraduates the scholarship will be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid. In the case of graduates it will be awarded by the Dean, School of Graduate Studies. In both cases it will be based on a recommendation from the Head, Department of Earth Sciences in consultation with the PDAC and the Prince family.

#### **THE GAR PYNN SCHOLARSHIP IN BUSINESS**

This endowed scholarship is made possible through a very kind donation to Memorial University of Newfoundland by an anonymous donor in recognition of Professor Pynn's contribution to the Faculty of Business Administration over his 27 years of service. A scholarship valued at approximately \$2,000.00 will be awarded annually to a full-time student at the end of his or her first year of full time study in the M.B.A. Program. It will be awarded to the student who has best demonstrated a combination of academic excellence, significant contributions to the faculty and leadership in student life within the M.B.A. Program. The scholarship will be awarded by the Dean of Graduate Studies upon the recommendation of the Dean, Faculty of Business Administration.

#### **THE ROTHERMERE FOUNDATION FELLOWSHIPS**

These Fellowships, the gift of the first Chancellor of the University, have been established to aid and encourage students who have taken their first degree at this University to pursue their studies for a British higher degree at a university of their choice in the United Kingdom. It is not intended that students who have obtained most of their education in Britain be eligible for a Fellowship. Awards are made by the Rothermere Fellowships Trust, on the recommendation of the President of Memorial University of Newfoundland.

The conditions of the award are as follows:

1. Candidates shall have completed a bachelor's degree at Memorial University of Newfoundland and have completed or be about to complete a master's degree either at Memorial University of Newfoundland or at another university in North America.
2. Fellowships will be awarded only to candidates who are proceeding to the United Kingdom to work for a British higher degree. Fellowships will not be awarded to candidates who wish to extend their stay in Britain to obtain a further British higher degree. Persons who are full-time members of a faculty of Memorial University of Newfoundland are not eligible for a Rothermere Fellowship.
3. The awards will be restricted to a maximum tenure of three years or the period requested in the candidate's application, whichever is the lesser. Continuation beyond the first year will depend on certification of competence and satisfactory progress.
4. Candidates must accept and complete the term of years for which the Fellowship has been awarded unless the requirements for the qualifications for which the Fellowship was awarded have been completed before the term expires. No interruption of tenure or postponement of the date of commencement of the Fellowship will be allowed.
5. One Fellowship is usually awarded each year.
6. The value of the award is currently £8,329.00 per annum, plus college fees. The fees will be paid directly to the university concerned. The grant will be credited to the Fellow's banking account in quarterly instalments, paid in advance.
7. The Trust will pay the airfare, economy class, for new Fellows from Newfoundland and Labrador to England. Return fare, economy class, will be paid with the proviso that the student must return within a month of the completion of the Fellowship in order to qualify for a refund of the cost of the fare back to Newfoundland and Labrador.
8. Completed applications must be submitted in duplicate to this office before the 30th of November and must be accompanied by the following documentation, also in duplicate:
  - a. an official transcript of marks from Memorial University of Newfoundland and from any other university attended;
  - b. a letter of recommendation from the dean of the faculty or school in which the applicant was registered as an undergraduate at Memorial University of Newfoundland;
  - c. a letter of recommendation from the head of the department in which applicant majored as an undergraduate at Memorial University of Newfoundland; and
  - d. a letter of recommendation from the applicant's present master's level supervisor;
  - e. as indicated in Section 15 of the application, applicants must submit a personal statement on how their research will contribute or be of value to Newfoundland and Labrador. The statement must also contain a section on the candidate's commitment to Newfoundland and Labrador.

Note that additional letters of recommendation and other information in support of the application may be submitted at the applicant's discretion.

Applicants are encouraged to begin the process of applying to universities in the United Kingdom before submitting the Rothermere Fellowship application.

Further information may be obtained by writing Margot Brown, Executive Director/Assistant to the President, Room AA2028, Arts and Administration Building, Memorial University of Newfoundland, St. John's, NL, A1C 5S7, or by telephone to (709) 737-8216, or by fax to (709) 737-2059, or by e-mail to mbrown@mun.ca.

#### **ROYAL BANK FELLOWSHIP IN MARINE STUDIES**

This fellowship is provided through the generosity of the Royal Bank of Canada. It is valued at \$5,000 and is open to full-time graduate students in fields related to marine studies including, but not limited to, marine biology, aquaculture, biopsychology, fisheries resource management, maritime history, cold ocean engineering, folklore and naval architecture. The award, given on the basis of academic merit, will be made by the Dean of the School of Graduate Studies upon recommendation from the Head of the appropriate academic units in the above noted areas. The award is not renewable but re-applications will be considered.

#### **THE VERY REVEREND EDWARD AND MARJORIE RUSTED HARLOW TRAVEL AWARD**

This is an award for graduate students who wish to travel to Harlow either to undertake graduate thesis-related research or who have enrolled in a graduate course that is offered at the Harlow Campus. One award of \$2,000.00 will be made annually to help defray the expenses for airfare and accommodation. Applications are to be made to the Dean of Graduate Studies and must be received by April 30th. Details of application are available from the School of Graduate Studies. The award will be made upon the recommendation of the

Dean's Advisory Committee on Medals and Awards.

#### **SCEPTRE INVESTMENT COUNSEL LIMITED BURSARY**

Sceptre Investment Counsel, one of Canada's leading pension and mutual fund managers and an important partner to Memorial University of Newfoundland for several years, has established this bursary as a demonstration of its commitment to community support. Valued at the accrued interest on their endowment, one or more bursaries will be awarded annually on a rotating basis between undergraduate and graduate students in any field of study. Successful candidate(s) must be Newfoundland residents demonstrating financial need and displaying qualities of leadership. In the case of undergraduates, it will be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid using scholarship standing as the primary determinant. Graduate students can make application in writing to the Dean of Graduate Studies. The award will be made by the Dean on the recommendation of the Awards and Medals Committee.

#### **SCHOOL OF GRADUATE STUDIES F.A. ALDRICH FELLOWSHIPS**

Six to eight fellowships valued at \$20,000 per annum on the doctoral level and \$15,000 on the masters level will be awarded to incoming full-time Canadian students. Renewal for one year at the doctoral level will be possible. These fellowships were established to celebrate the 25th Anniversary of the School of Graduate Studies in 1999 from a portion of the proceeds of the *Opportunity Fund* and in honor of Memorial University of Newfoundland's first Dean of the School of Graduate Studies, Dr. F.A. Aldrich (1970-1987). Recipients will be selected by the Dean of the School of Graduate Studies, on the recommendation of the Awards and Medals Committee, on the basis of exceptional academic achievement.

#### **SCHOOL OF PHARMACY MILLENNIUM GRADUATE FELLOWSHIP**

This fellowship, valued at the annual accrued interest on an initial endowment from the School of Pharmacy, is to be awarded annually to a full-time graduate student in Pharmacy and will be in addition to the regular graduate student support held. The award is made on the basis of academic excellence in both course work and research and is normally renewable once only, for a Master's recipient and twice only, for a doctoral recipient. Preference will be given to Canadian citizens and landed immigrants. The award will be made by the Dean of Graduate Studies on the recommendation of the Director of Pharmacy.

#### **THE SCOTIABANK BURSARIES FOR INTERNATIONAL STUDY**

These bursaries, funded by a generous donation from Scotiabank to *The Opportunity Fund*, are intended to help students broaden their educational experience and cultivate an international perspective through study abroad while pursuing studies in the Faculty of Arts at Memorial University of Newfoundland. Fifteen or more bursaries will be available with approximately ten at the undergraduate level valued at \$1,000.00 each and five at the graduate level valued at \$2,000.00 each. The undergraduate bursaries will be awarded on the basis of scholarship standing to full-time students who are participating in one of the overseas Field Schools or study abroad opportunities sponsored by the Faculty of Arts. These include the Arts semester in Harlow (every Fall) as well as Summer programs at Harlow and in other countries such as Ireland, Malta, Russia, etc. In addition, students wishing to participate in formal exchange programs through the faculty of Arts, such as those with the University of Keele, will also qualify. The graduate bursaries will be based on academics as well and will assist full-time Faculty of Arts master's and doctoral students (including those in interdisciplinary programs) to travel to other countries for the purpose of thesis research and thesis-related study. In both cases financial need may be taken into consideration. In the case of undergraduates the bursaries will be awarded by the Senate Committee on Undergraduate Scholarships and Financial Aid. In the case of graduates they will be awarded by the Dean, School of Graduate Studies. In both cases the bursaries will be awarded on the basis of a recommendation from the Dean, Faculty of Arts.

#### **THE DR. JORGE SEGOVIA SCHOLARSHIP IN HEALTH SERVICES RESEARCH**

This scholarship has been established in honour of Dr. Jorge Segovia (former Associate Dean of Community Health and Professor Emeritus of Social Medicine). It is valued at \$500.00 annually and will be awarded to any full-time graduate student doing Health Service Research at Memorial University of Newfoundland. The recipient of this scholarship will be selected on scholarship standing through such accomplishments as best paper, best thesis, or best research project. The scholarship will be awarded by the Dean, School of Graduate Studies, on the recommendation of the Dean, Faculty of Medicine, in consultation with the Associate Dean Community Health.

#### **DR. ALFRED K. SNELGROVE GRADUATE SCHOLARSHIP IN EARTH SCIENCES**

A bequest from Dr. Alfred K. Snelgrove makes possible up to two scholarships, valued at \$5,000.00 per annum, for students applying for or enrolled in a graduate program in the Department of Earth Sciences. These scholarships are intended primarily for Canadian citizens or landed immigrants, and are awarded by the Dean of Graduate Studies on the recommendation of the Head of the Department of Earth Sciences. The scholarships are tenable for one year, and may be renewed. They may be held in addition to other scholarships and fellowships, and will be awarded only to applicants whose academic excellence and research potential can be clearly demonstrated.

#### **SPECIAL SCHOLARSHIPS FOR STUDENTS TO PURSUE GRADUATE STUDIES RELATED TO RESOURCE DEVELOPMENT**

The "Special Scholarships for Studies in the Sciences Related to Resource Development" will be in the amount of \$7500.00 annually for students registered in full-time post-graduate studies at Memorial University of Newfoundland, in programs leading to the Master's and/or Doctorate degrees in the Sciences related to Resource Development. A scholarship may be renewed and awarded for one additional year only.

The scholarships are to be tenable at Memorial University of Newfoundland, but under special circumstances may include approved studies abroad. Eligible candidates normally should be residents of the province, or should have been resident in the province for at least three years prior to entering the program, excluding time spent at post-secondary institutions.

Candidates will normally have a First-Class Undergraduate Degree, or a Second-Class Degree with First-Class standing in courses in their major field of study. Candidates should apply for the scholarships to the Office of the Dean of Graduate Studies, Memorial University of Newfoundland.

#### **THE DR. ANNA C. TEMPLETON MEMORIAL GRADUATE SCHOLARSHIP**

This fund was established from a bequest to the University by Dr. Anna C. Templeton. Awarded annually and valued at approximately 75% of the earned interest, the scholarship is open to full-time graduate students in any year of their program who are residents of Newfoundland and Labrador. Preference will be given to students who have demonstrated leadership in teaching, promotion or development of craft or home economics in the province of Newfoundland and Labrador. Normally the award will be made to a student in the Faculty of Arts, the Faculty of Science, the School of Nursing, the School of Social Work or at Sir Wilfred Grenfell College, or the Fisheries and Marine Institute. The scholarship will be awarded by the Dean, School of Graduate Studies upon recommendation from the head of appropriate academic units in the above-noted areas. The award is not renewable, but reapplications will be considered.

#### **THE J. BERYL TRUSCOTT GRADUATE SCHOLARSHIP**

This fund is established in memorial to J. Beryl Truscott, a long-time employee of the Marine Sciences Research Laboratory, and is administered by the School of Graduate Studies. It is valued at \$2000.00 and is normally awarded annually to a full-time student pursuing a graduate program in either Chemistry or Biochemistry. Awards will be made by the Dean of Graduate Studies based upon recommendations from the Head, Department of Biochemistry and the Head, Department of Chemistry.

#### **THE LESLIE TUCK-AVIAN ECOLOGY AWARD**

This endowed scholarship is named in honor of the late Dr. Leslie Mills Tuck, the first Dominion Wildlife Officer and Canadian Wildlife

Service Officer in Newfoundland and Labrador. Author of two definitive and award-winning books on Newfoundland birds, *The Murres* (1961) and *The Snipes* (1972), Leslie Tuck was a J.L. Paton Research Chair in the Department of Psychology following his retirement from the Canadian Wildlife Service, and a member of the Natural History Society of Newfoundland and Labrador which he was instrumental in sustaining.

The award, valued at \$1,000 annually, will be made by the Dean of Graduate Studies on the recommendation of the Dean of Science. A committee appointed by the Dean of Science shall select a nominee on the basis of a 500 word essay on the student's research and its relevance to the avian ecology and ecosystem preservation in Newfoundland and Labrador. Eligible candidates must be full-time graduate students in biopsychology, biology or psychology. The winning essay will be published in *The Osprey*, the quarterly publication of the Natural History Society of Newfoundland and Labrador.

#### **UNIVERSITY SUPPORT**

A limited amount of University Support may be awarded to full-time students working toward graduate degrees at this University. Awards will be made by the Dean of Graduate Studies on the recommendations of Departments. These awards may be supplemented by remuneration for extra duties performed in the Departments at the discretion of Department Heads.

#### **THE GEORGE WESTON GRADUATE SCHOLARSHIPS**

Two scholarships valued at a minimum of \$2,000.00 each, will be awarded annually to full-time graduate students, one in the field of Marine Biology and one in the field of Marine Engineering. These students must have been born in one of the Atlantic Provinces. Tenable at Memorial University of Newfoundland, these scholarships will be awarded by the Dean of Graduate Studies upon recommendation from the Deans of Science and Engineering.

#### **THE WOOD GUNDY SCHOLARSHIP FOR GRADUATE BUSINESS STUDENTS**

The Wood Gundy Scholarship for Graduate Business Students will be awarded annually to an MBA student of scholarship standing who has demonstrated leadership ability through participation in student, faculty or University activities and/or contribution to the larger community. Preference will be given to students with a demonstrated career interest in the area of finance. The value of this scholarship will be determined by the annual income derived from the initial endowment. It will be awarded by the Dean of Graduate Studies upon the recommendation of the Dean, Faculty of Business Administration.

#### **WOMEN'S ASSOCIATION OF MEMORIAL UNIVERSITY OF NEWFOUNDLAND GRADUATE STUDENT SCHOLARSHIP**

Two Master's level and two Ph.D. level scholarships valued at \$1,200.00 each are awarded annually to full-time students entering a program in the School of Graduate Studies. Of the Master's level awards, one shall be for a thesis program, and one for a non-thesis program. Financial need as well as scholarship standing will be taken into consideration. The awards will be made upon the recommendation of the Dean of Graduate Studies.

## **10.2 Graduate Awards Administered By Other Authorities**

#### **THE ASSOCIATION OF REGISTERED NURSES OF NEWFOUNDLAND EDUCATION AND RESEARCH TRUST SCHOLARSHIP**

A \$1000.00 scholarship is available from the A.R.N.N. for students pursuing graduate studies in Nursing. The application form is available in writing from The Association of Registered Nurses of Newfoundland, P.O. Box 6116, St. John's, NL, A1C 5X8 or by telephone to (709) 753-6040.

#### **THE BOWRING/HARLOW SCHOLARSHIP**

The Board of C.T. Bowring & Co. Ltd., London, England, together with Mr. Edgar Bowring and Mr. Peter Bowring, former Chairmen of that Company, have made available to Memorial University of Newfoundland, through the Harlow Campus Trust, a grant to establish a scholarship fund for students at the post-baccalaureate level who wish to live at the University's Harlow Campus while undertaking approved studies in Great Britain. It is hoped that interest on the fund will finance up to two annual scholarships of £600 each. In special circumstances the interest may be applied to a single award.

In making the award, scholastic achievement and financial need will be considered. The scholarships are awarded by the Trustees of the Harlow Campus Trust on submissions of the Dean of Graduate Studies and the Co-ordinator of Harlow following recommendations from the Faculties/Schools responsible for the applicants' academic programs.

#### **THE CANADIAN GERONTOLOGICAL NURSING ASSOCIATION**

Sancell/CGNA Nursing Scholarship - 2 awards of \$1000.00. The purpose is to provide support to outstanding Registered Nurses undergoing further education in either an undergraduate nursing degree program, or a post graduate degree program that is relevant to career development in the field of Gerontological Nursing.

The candidate must:

- Be a member of the Canadian Gerontological Nursing Association.
- Be registered to practise nursing in a Canadian Province.
- Have gained acceptance to a suitable full-time program in a recognized educational institution at the time of taking up the award.
- Exhibit interest in and potential for, a career in Gerontological nursing in Canada.
- Be a Canadian citizen or landed immigrant at the time of taking up the award.

The scholarship is administered by the CGNA and further information regarding criteria can be obtained in writing to CGNA, c/o Nancy Bol, Parkwood Hospital, 801 Commissioners Rd. E., London, Ontario N6C 5J1

#### **CANADIAN NURSES FOUNDATION SCHOLARSHIPS & FELLOWSHIPS COMPETITION**

Scholarships and fellowships are awarded to nurses pursuing education at the baccalaureate, master and doctoral levels. In addition to non-specific studies, awards are available for specific area of practice such as northern nursing, occupational health, dialysis nursing, neurological nursing, oncology nursing, community health, gerontology nursing, paediatric nursing and nursing administration.

Applications must be members of CNA and CNF, be Canadian citizens and agree to work in Canada for a period of one year for each year of financial assistance. Application forms are available from their website [www.canadiannursesfoundation.com](http://www.canadiannursesfoundation.com) or in writing to Canadian Nurses Foundation, 50 Driveway, Ottawa, Ontario K2P 1E2 or by telephone to (613)237-2133 or by fax to (613)237-3520.

#### **GRADUATE STUDENTS' UNION (GSU) AWARD FOR EXCELLENCE IN COMMUNITY SERVICE**

Two awards of \$250 each are awarded annually to graduate students of any program at Memorial University of Newfoundland. A selection committee will determine award recipients based on community service endeavours. Nomination forms and further information are available at the GSU website [www.mun.ca/gsu](http://www.mun.ca/gsu)

#### **GRADUATE STUDENTS' UNION (GSU) AWARD FOR EXCELLENCE IN RESEARCH**

Two awards of \$250 each are awarded annually to graduate students of any program at Memorial University of Newfoundland. A selection committee will determine award recipients based on research the student has accomplished at Memorial relative to the field in which they study. Nomination forms and further information are available at the GSU website [www.mun.ca/gsu](http://www.mun.ca/gsu).

#### **GRADUATE STUDENTS' UNION (GSU) AWARD FOR EXCELLENCE IN TEACHING**

Two awards of \$250 each are awarded annually to graduate students of any program at Memorial University of Newfoundland. A

selection committee will determine award recipients based on excellence in teaching-related activities, as demonstrated by student comments, innovative teaching methods, and evidence of exceeding normal teaching requirements. Nomination forms and further information are available at the GSU website [www.mun.ca/gsu](http://www.mun.ca/gsu). Two awards of \$250 each are awarded annually to graduate students of any program at Memorial. A selection committee will determine award recipients based on research the student has accomplished at Memorial relative to the field in which they study. Nomination forms and further information are available at the GSU website [www.mun.ca/gsu](http://www.mun.ca/gsu)

#### **I.O.D.E. SCHOLARSHIPS FOR GRADUATE STUDY IN CANADA OR OVERSEAS WITHIN THE COMMONWEALTH**

To honour the memory of the men and women who gave their lives for Canada in World Wars I and II, these memorials were established to provide scholarships for graduate study. Candidates must be Canadian citizens and must hold a first degree from a recognized university in Canada. At the time of applying, a candidate must hold a Master's degree or be in the final year of studies leading to a Master's degree. Further Information is available in writing to The Head Office, I.O.D.E., 40 Orchard View Boulevard, Suite 254, Toronto, Ontario M4R 1B9.

#### **NATURAL SCIENCES AND ENGINEERING RESEARCH COUNCIL OF CANADA (NSERC)**

The Council awards each year, in open competition, a number of post-graduate scholarships in Science and Engineering to assist students in undertaking graduate study and research leading to advanced degrees. These scholarships and fellowships are tenable at both Canadian universities and institutions outside Canada. Further information and applications are available from their website [www.nserc.ca](http://www.nserc.ca)

#### **THE J.W. PICKERSGILL FELLOWSHIP**

The J.W. Pickersgill Fellowship Act (1968) provides for the award of a fellowship valued at \$7,500.00 per annum to a graduate of Memorial University of Newfoundland for the pursuit of doctoral studies in History or Political Science at any university. Application forms and particulars are available from the Office of the Dean of Arts, to whom applications must be submitted by February 15.

#### **ROTARY AWARDS**

The Rotary Foundation of Rotary International offers Graduate Fellowships for those who will have received a bachelor's degree or equivalent. Further information and applications are available from their website [www.rotary.org](http://www.rotary.org) or in writing to The Rotary Foundation of Rotary International, One Rotary Centre, 1560 Sherman Avenue, Evanston, IL 60201 USA.

#### **THE SCHULICH SCHOLARSHIP FOR ENTREPRENEURSHIP**

This scholarship, sponsored by Nevada Capital Corporation Ltd. is open to students completing the first year of the M.B.A. program of the Faculty of Business Administration at Memorial University of Newfoundland. The scholarship will be awarded to the student who, in the opinion of a Selection Committee, Faculty of Business Administration, has best demonstrated an entrepreneurial orientation in first-year M.B.A. studies and in other related activities. Students must make special application for the award to the Dean, Faculty of Business Administration.

#### **SOCIAL SCIENCES AND HUMANITIES RESEARCH COUNCIL OF CANADA (SSHRC)**

The Council offers fellowships and grants in the Social Sciences and Humanities. Among Council programs of aid are research grants and short-term grants, and the following awards that are based upon annual competitions: doctoral fellowships and postdoctoral fellowships. Further information and applications are available from their website [www.sshrc.ca](http://www.sshrc.ca)

### **10.3 Other Awards**

Fellowships and research grants for advanced study are available, in open competition, from many other organizations and foundations. Information about these awards is available from the Office of the Dean of Graduate Studies.

*ENROLMENT STATISTICS*

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Current University Calendar available at  
[mun.ca/university-calendar](http://mun.ca/university-calendar)

# 1 Memorial University of Newfoundland

Enrolment Memorial University of Newfoundland										
	Undergraduate						Graduate	Post-Graduate (Medicine)	Total	
	Full-time						Part-time			
	1st Year	2nd Year	3rd Year	4th Year	5th Year	Special				
1949-50	175	83	37	3	-	9	-	-	-	307
1950-51	239	91	34	16	-	20	-	-	-	400
1951-52	211	101	36	27	-	41	-	-	-	416
1952-53	229	102	51	25	-	50	-	-	-	457
1953-54	204	92	51	39	-	14	57	-	-	457
1954-55	295	92	59	33	-	3	98	4	-	584
1955-56	358	119	57	39	-	49	60	3	-	685
1956-57	400	180	76	39	-	76	82	9	-	862
1957-58	587	205	140	55	-	6	117	20	-	1130
1958-59	572	241	154	92	-	-	70	21	-	1150
1959-60	543	247	157	112	-	2	102	21	-	1184
1960-61	631	318	171	114	-	3	133	30	-	1400
1961-62	986	386	245	127	14	4	148	15	-	1925
1962-63	1055	476	264	149	22	4	172	32	-	2174
1963-64	1103	557	313	179	44	3	332	48	-	2579
1964-65	1239	670	424	224	61	6	418	59	-	3101
1965-66	1424	834	473	287	88	10	727	100	-	3943
1966-67	1649	1040	530	456	159	-	840	88	-	4762
1967-68	1671	1082	857	516	201	-	1076	158	-	5561
1968-69	1577	1228	922	631	205	-	1263	219	-	6045
1969-70	1768	1272	926	632	261	-	1990	390	-	7239
1970-71	2323	1626	995	766	366	-	2747	481	-	9304
1971-72	1945	2098	1257	856	573	-	3281	640	-	10650
1972-73	2107	1747	1425	1085	602	-	3240	702	-	10908
1973-74	1497	1547	1215	1077	712	-	3134	753	-	9935
1974-75	1592	1252	1119	976	657	-	3233	853	-	9682
1975-76	1769	1376	1051	845	771	-	2888	830	-	9530
1976-77	2214	1468	1019	751	792	-	2694	812	-	9750
1977-78	2084	1711	1123	670	824	-	2594	857	-	9863
1978-79	1793	1646	1031	606	790	-	2717	792	-	9375
1979-80	1953	1721	975	647	811	-	3179	750	-	10036
1980-81	2166	1852	1059	736	986	-	3184	814	-	10797
1981-82	2507	1372	1150	890	1539	-	3163	807	-	11428
1982-83	2970	1931	1290	845	1509	-	3656	946	-	13147
1983-84	1363	2366	1414	984	1524	-	3827	964	-	12442
1984-85	3172	1299	1710	1196	1542	-	4096	926	-	13941
1985-86	3377	2642	1071	1427	1553	-	4058	890	-	15018
1986-87	3426	2634	1956	889	1799	-	3963	1236	-	15903
1987-88	3546	2647	1999	1321	1403	-	4044	1074	-	16034
1988-89	3659	2657	1863	1436	1647	-	3929	1053	-	16244
1989-90	3799	2557	1995	1387	1790	-	4032	1061	-	16621
1990-91	4070	2897	2013	1594	1898	-	4023	1073	-	17568
1991-92	3951	2956	2217	1586	1896	-	3926	1103	-	17635
1992-93	4256	2990	2165	1706	1951	-	4385	1179	-	18632
1993-94	4126	3102	2199	1578	1945	-	3453	1168	-	17571
1994-95	4443	2996	2262	1680	1793	-	2823	1229	-	17226
1995-96	3280	2957	2250	1723	1815	-	2882	1366	210	16483
1996-97	3342	2826	2177	1954	2036	-	2179	1415	209	16138
1997-98	3409	2753	2237	1851	1973	-	1931	1668	216	16038
1998-99	3066	2901	2270	1936	1960	-	1909	1623	199	15864
1999-00	3134	2873	2239	1888	1956	-	2107	1586	192	15975
2000-01	3287	2910	2224	1840	1978	-	1932	1659	174	16004
2001-02	3179	3018	2251	1873	1916	-	2057	1687	175	16156
2002-03	3077	3174	2401	1857	2053	-	2156	1843	174	16735
2003-04	3120	3265	2528	1996	2029	-	2269	2015	172	17394
2004-05	3100	3216	2622	2048	2205	-	2223	2187	184	17785
2005-06	3101	3050	2637	2158	2238	-	2143	2295	181	17803

## 2 Fisheries and Marine Institute

Enrolment			
Fisheries and Marine Institute of Memorial University of Newfoundland			
	Full-time	Part-time	Total
1992-93	1478	4675	6153
1993-94	1586	4840	6426
1994-95	1021	2699	3720
1995-96	947	2314	3261
1996-97	931	3152	4083
1997-98	809	5165	5974
1998-99	1006	5509	6515
1999-00	989	6522	7511
2000-01	1012	5295	6307
2001-02	1008	5411	6419
2002-03	1221	5160	6381
2003-04	1141	6724	7865
2004-05	1159	7706	8865

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 Current University Calendar available at  
[mun.ca/university-calendar](http://mun.ca/university-calendar)

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Current University Calendar available at  
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For an explanation of terms used in this Calendar, see the **Glossary of Terms Used in This Calendar**. When the designations SWGC and Marine are used, they indicate references specific to Sir Wilfred Grenfell College and the Fisheries and Marine Institute respectively.

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